ADMINISTRATIVE THEORY

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PREFACE

Administrative theory is primarily based on the conceptuation of the experience or observation of the operational situation in administration. It may emerge from the experience or observation of a particular situation. Alternatively, it may have a wider base and reinforcement derived from comparative studies. It is also true that sometimes the ideas or opinions of some seminal minds, which become part of the climate of the age, do have their impact on the evolution of human thought. Similarly, the developments in other areas of knowledge also influence various strands of thinking in public administration. These developments may take place in the realm of humanities, social sciences or even biological and physical sciences, but both their ideas and idiom get incorporated in the conceptualisation of the particular facet of administration. It is only natural, as public administration is concerned with the operating social reality, and also provides a framework to the theoretical or practical developments in other disciplines or areas of human knowledge.

The study of public administration, as an academic discipline, is comparatively new though administration operationally had its origins probably when men first organised themselves to accomplish some common but difficult objectives which singly could not be achieved. Public administration is thus as old as civilization itself. The nature, forms and instrumentalities of public administration would naturally differ or change with changing circumstances. But with growing concern or changing problems will also arise efforts or even fresh thinking as to how the group functioning should cope up with such emerging situations. Thus, theory and action in public administration feed each other. While this is perennially true, the intensity as well as the frequency and the extent of interaction between the two tend to become more pronounced with the increased complexity of the social milieu and economic challenges.

In the earlier stages of human history, one finds that the state-craft and public administration are almost indistinguishable. The axioms, aphorism or strategies which will help a successful ruler will obviously percolate to and guide the limited group of people who will carry out the wishes or the mandate of the ruler. We have a number of works on state-craft written at different times in different languages and in different countries which, in a way, provide the first underpinnings to the evolution of administrative theory. Many insights or prescriptions as

enshrined in these works have a contemporary ring as well as relevance.

One also finds that in the earlier stages there was also hardly any distinction between military organisation and making arrangements for administration of public affairs for the convenience of the people. The distinction between 'military' service and public service and the need for it was felt in not a very distant past. Probably it had something to do with the coercive nature of the state or the pressing need for self preservation againt attacks from the hosti'e outside elements. Thinking developed along with actual organisational improvements in the field of better military preparedness. We, therefore, find many concepts and ideas of military functioning filtering into public administration from the hoary past. It is well known that the process has continued till today and we find it amply reflected even in the recent developments in administrative as well as management practices and thinking. Hence it is the intellectual process of conceptualisation of the experience or observation of the points of strength or of inadequacy in military administration which provide another spurt to thinking in matters administrative and about public affairs.

From the very commencement of the publication of *The Indian Journal of Public Administration*, learned articles dealing with wider perspectives and conceptual questions have been published. Many of them generated a fair amount of debate and intellectual stimulus for further exploration and research. It was felt that a compilation of such contributions be made for ready reference and study. In view of the interest of Dr. Ramesh K. Arora in the area of administrative theory, I requested him to make a selection of some articles of more enduring nature from this angle. He also agreed to provide an analysis of the principal theme or orientation of the articles so chosen. The articles deal with different aspects of administrative, organisational and bureaucratic theory. In his analytical presentation, Dr. Arora has not only given a bird's eye view of the present status of administrative theory and outlined its principal features or orientations but has also discussed the main analytical thrust of each article and has tried to place it in the context of "the contemporary scholarship in administrative theory". From his analysis, he concludes that "over the past few decades, administrative theory has moved from a state of orthodoxy to a state of passionate skepticism; from a state of objective and universal postulates to a state of phenomenological view of administrative reality; and from a state of inviolable principles to a state of contingency approach". The aforesaid observation is academically significant and merits discussion.

I have no doubt that this volume will be of use to students of public administration and may even unfold vistas of academic thinking and research. It is thus that new ideas get generated and become part of the intellectual climate of times and influence administrative policy and action.

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INTRODUCTION

Public Administration as an aspect of government activity has existed ever since the emergence of an organzied political system. However, it is ironical that the rich experiences of the most successful polities in the realm of monitoring public administrative systems have rarely been codified and documented, nor have concrete attempts been made to conceptualize systematically the empirical patterns of administrative behaviour that so well characterized several mighty political systems. Consequently, there has remained a big chasm between the advanced complexity of administrative reality and the moderate efforts made to conceptualize it.

As a field of systematic study, the development of public administration has been only recent. In the eighteenth and the nineteenth centuries, Cameralism, which was concerned with the orderly management of government affairs, had become an area of special interest to German scholars. Contemporaneously, in the United States, Alexander Hamilton and Thomas Jefferson had shown keen interest in certain operational aspects of public administration, but the credit for making a beginning—may be only symbolic—of the academic study of public administration goes to Woodrow Wilson who, through his seminal essay, "The Study of Administration", underscored the necessity of developing the scientific foundations of the discipline.

Search for Universal Generalizations

The immediate impact of Wilson's exhortation on initiating any exercise of conceptualization in public administration was insignificant. It was in fact the Scientific Management Movement initiated by Frederick W. Taylor that created a fascination among management and administration experts to formulate certain conceptual categories for explaining and for prescribing administrative behaviour in industrial settings. Taylorism was conceived to be a scientific methodology of careful observation, measurement and generalization. Soon, it popularized the search for universal generalizations on the administrative process, and consequently, a concern with the 'principles' of administration was evident in those writings on public administration which followed the maturation of the Scientific Management Movement.

The 'orthodoxy' of the principles of administration, so much evident in the writings of early scholars (*e.g.*, Fayol), represented an initial stage in the development of administrative sciences, but which

created an impression as if, what Thomas Kuhn has called, a 'paradigm' of administrative studies had already been achieved.

The Human Variable

The Human Relations Movement, following the path-breaking Hawthorne experiments, did not challenge the basic premises of the classical school and its principles, but instead complemented the early administrative studies by adding a few more crucial variables, such as leadership, motivation, communication and morale as factors which together with the structural sub-systems help achieve the tacit and implied goals of organisational efficiency and economy. Thus, interestingly, Elton Mayo and his associates did not question the scientific character of the principles of administration, but instead contributed to the growth of administrative theory by devising a new set of socio-psychological concepts, by highlighting the need for looking at an administrative organization as a social system and by stressing the need for following rigorous research methods in order to arrive at generalizations about the administrative reality. A happy blend of the formal administrative model and the human relations approach is very much manifest in Chester Barnard's outstanding study, *The Functions of the Executive*. It is interesting to note that the synthesis of the structural and the human relations foci still remains a dominant concern of the contemporary administrative theorists.

The Challenging Artillery

The 1940's set the stage for several challenges to the early administrative theory. These challenges emanated from a variety of directions. First, scholars such as Herbert Simon, Dwight Waldo and Edwin Stene stressed the need for promoting increasingly 'scientific' explanations in the administrative literature. Second, writers such as Robert Dahl and John Gaus underscored the desirability of having ecological studies in public administration. Again, it was Robert Dahl who asserted that as long as the study of public administration was not comparative, claims for a 'science' of public administration would sound hollow. Thus the third challenge came from the protagonists of comparative administrative studies. Fourth, the behaviouralists, led by Herbert Simon, highlighted the significance of focusing upon the dynamics of human behaviour in administrative settings. Simon's assertion that "decision-making is the heart of administration" became a motivating factor in initiating a good number of studies on administrative decision-making All these four academic challenges collectively forced the supporters of the early administrative theory to have a fresh and critical look at their 'truths' and thus moderate and modulate considerably their premises, concepts and conclusions. Yet, the structural focus remained the

dominant theme in administrative analysis till the end of 1940's.

Weber's 'Arrival' on the Scene

The decade of 1940's also saw the emergence of possibly the strongest conceptualization so far in administrative thought. This was reflected through a vigorous interest of the English speaking world in the newly found translations of the writings of the eminent German sociologist, Max Weber, whose ideal-type model of bureaucracy formulated at the end of the nineteenth century and the beginning of the twentieth century (but translated into English a few decades later) raised hopes for the unfolding of a model of an organized administrative system which appeared to represent the reality prevailing in most countries of the world, and more particularly in the industrialized west. It is extremely interesting to note that Weber's bureaucratic model and the classical organizational models developed in the USA evolved contemporaneously but without any apparent associational influences on each other. And yet, both have remarkable similarities in their emphasis on the structural configurations in an administrative system. Probably, this similarity reflected an affinity in the socio-economic environment of the US and Germany in the late nineteenth and early twentieth century—a period in which both sets of administrative models developed. But certainly, Weber's ideal-type model goes well beyond the structural dimensions of bureaucracy and incorporates in itself a few important aspects of bureaucratic behaviour.

Multi-Foci Conceptualizations

The 1950's saw a rigorous emphasis being placed in administrative writings on almost all the prominent foci that were evolved in the 1940's, *viz.*, behavioural, decisional, comparative, systemic, ecological and Weberian. In addition, however, there was an emergent emphasis on the fusion between the individual and the organization as represented in the writings of Chris Argyris whose impact on administrative theory was to become manifest only in the 1960's. But the fifth decade of the twentienth century saw the rise of Fred Riggs who, through his macro, systemic, ecological and structural-functional models of the administrative systems, opened new vistas for cross-cultural administrative research.

'New' Human Relations Approach

In the 1960's, the modified traditional, human relations, comparative, systemic, ecological and behavioural emphases continued to be highlighted in the conceptualizations on administrative systems. These were buttressed further by a 'new human relations' approach popularized by such scholars as Chris Argyris, Rensis Likert, Douglas McGregor

and Warren Bennis. Notably, the writings of these scholars stressed upon the need for changing the traditional assumptions about human nature and for making an organization an organic institution which voluntarily provides opportunities to its members for the development of their personalities.

Development Administration and New Public Administration

Two other major developments in administrative theory were also witnessed in the 1960's. First was the crystallization of the concepts of 'development administration' and 'administrative development' by Edward Weidner and Fred Riggs respectively, and the second was an exhortation by Dwight Waldo and his younger colleagues to enter the vista of 'New Public Administration'. Evolved as an upshot of the Minnowbrook conference of 1968, New Public Administration is concerned with phenomenological approach, conceptually, and with humanistic orientation, motivationally. Its major thrust is on enhancing the role and capacity of the public administrative system to meet the challenges of, and to direct, social change. Notably, the phenomenological orientation has challenged the postivistic traditions of administrative research. To a phenomenologist, an organization cannot exist independently of the image that it forms in the minds of the perceivers (including the client groups). Thus the separation of values and facts is shunned by the students of New Public Administration and this approach has provided solid foundation to the post-behavioural revolution initiated by David Easton and others.

There is one major area in which New Public Administration shares its concerns with development administration. Both are 'goal-oriented' as well as 'change-oriented'. Even their loci are not entirely different. Yet apparently, development administration concerns itself mainly with the administrative systems of developing countries (though intellectually, it should not be confined to this areal approach), while New Public Administration focuses upon the processes of making public administrative organizations more positivist and activist in western societies which presently are supposed to be passing through a 'time of turbulence'.

Making a public administrative system an effective instrument of goal-oriented change requires fuller unfoldment of its potential capacities and capabilities. Such a concern is reflected in the concept of 'administrative development' which concerns itself with the direction of purposive changes in the administrative structures and in the behaviour of administrators. Interestingly, the movement of administrative development has emerged as a parallel phenomenon to the dominant concern of social psychologists with organizational effectiveness, organizational change and organizational development. The 1960's witnessed an upsurge of interest in looking at the internal dynamics of a public administrative system.

And as an upshot of massive cross-disciplinary research, a high level of intermeshing has taken place between the conceptual constructs focusing upon the internal environment of an organization and those concentrating on the external environment of a public administrative system.

The Synthesis Syndrome

It should not be surprising to observe that the field of administrative theory, especially since World War II, has shown a remarkable capacity to absorb, assimilate, synthesize and expand. Without rejecting the old, it has welcomed the new, and welcomed in a manner that would make a co-existence of heterogenous ideas, concepts, foci, models and methods extremely purposeful and satisfying. No wonder, the discipline of public administration, despite serious doubts of its detractors about its identity, has reached, in the early eighties, a state of cautious optimism. Notably, the question of 'identity' should be seen not in relation to the 'individuality' of a discipline but from the angle of its ability to monitor the process of intellectual cross-fertilization to its advantage. If identity were to be narrowly defined in terms of 'individuality', English language, which has successfully thrived on borrowing from a variety of sources, would have no right to earn the status of the most developed means of communication in the contemporary world. Therefore, administrative theory today should not be seen as a 'hybrid' effort but rather as a 'cosmopolitan' phenomenon which has drawn its strength from its virtues of adaptability, change and renovation.

Poly-Paradigmatic State

Presently, the administrative theory is in a manifest 'poly-paradigmatic' stage. It is characterized by a rich variety of conceptual constructs of macro, middle-range and micro levels. The orientations that it encompasses range from the traditional-formal to the extremely postivistic. And its concerns range from a man in the organization to the endless cosmos which perceptibly or imperceptibly influence the administrative man. No wonder, therefore, that we find a series of foci flourishing in the broad realm of administrative theory. Thus, one encounters frequently in the administrative literature explanations and/or applications of a variety of conceptual constructs which concentrate on a series of loci and foci. Briefly, the contemporary administrative theory is characterized by the following distinct but overlapping (as against exclusive) orientations :

1. Conceptual constructs with a dominant emphasis on structural designing in organization. Studies adopting the classical approach—though in a modified form—would fall in this category.

2. Theoretical formulations which focus on internal processes within public administrative organizations, particularly on decision-making, communication and control.
3. Theoretical formulations, drawing inspiration from Max Weber's bureaucratic model, focusing on the structural configurations and behavioural patterns of bureaucracy in intra-cultural and cross-cultural settings.
4. Conceptual schemes concentrating on the behaviour of the individual in an organization. These have primarily a socio-psychological orientation.
5. Models which stress on the fusion or integration between the human being and the organizational structure, highlighting the need for a synthesis between the individual goals and the organizational goals.
6. Humanistic models which accord primacy to the human being and highlight the 'human' responsibility of public organizations.
7. Conceptual constructs concerned mainly with enhancing organizational effectiveness and administrative development. Models of organization development and other aspects of organizational change would also be placed in this classification.
8. Conceptual constructs adopting a systemic orientation and analyzing a public administrative system from a wholistic angle, thus examining the interactions and mutual inter-dependencies among the various parts of the bureaucratic systems. Structural-functionalists may also be considered to belong to this broad category.
9. Conceptualizations which explore the structure of the external environment of a public administrative system and, while applying an 'ecological' approach, examine the interactions and influences between a system and its environment.
10. Models focusing on the administrative reality in developing nations and on development administration. These bear a dominantly comparative orientation.
11. Conceptualizations attempting a social reconstruction of administrative reality, having their roots in phenomenological approach.
12. Studies with a primary aim of synthesizing various theoretical constructs in administrative sciences. Dwight Waldo's seminal contribution will find a place in this category.

This certainly is not the end of the catalogue of major conceptual orientations in public administration. However, the list above does highlight the point that presently the discipline is passing through a state of multi-faceted conceptualization.

Indian Journal of Public Administration, founded in 1955, aptly represents and reflects the prominent orientations of the contemporary scholarship in administrative theory. While most of the articles published in this journal over the past twenty-five years have had dominant policy concerns, quite a few good essays on administrative theory found a place in the journal. For the scope of the present volume, only a dozen articles have been selected. These articles relate to almost all the foci enumerated above, thus making the selection not only representative of the theoretical emphasis of *IJPA* but also of the current scholarship in public administration. One point, however, needs to be stressed. It is revealing that most of the articles incorporated in the present volume (and for that matter in *IJPA* and the rest of the administrative literature) concern with 'administrative' theory in a generic sense, with very little focus on the experiences of *public* bureaucracies. Thus, the specialized area of governmental (or public) administrative systems appears to have been lost in the maze of multivariate and multi-dimensional administrative theory which in its operational ramifications is closer to the more popular 'organization theory' than to the theory and practice of routine but challenging tasks of public administration. Certainly, no dichotomous categories of public and non-public administration are suggested here, but a question does loom large before an ardent student of public administration: Are the style, substance and the setting of administration not conceptually discrete (though inter-related) phenomena ?

Articles selected for the present volume, however, individually and collectively, highlight certain themes and sub-themes in administrative theory formulation, with varying emphases on the 'public' component of administration. A brief reference to these essays follows.

Use of Models in Administrative Analysis

The language of science research is still unclear about the usage (and abusage) of organizing concepts such as models, schema, maps, paradigms, frameworks and theories. In public administration, as in other social sciences, a 'model' is the most commonly used organizing tool of conceptualization. It is generally viewed as a conscious attempt to develop and define concept(s) useful in classifying data, describing reality and/or hypothesizing about it. The terms 'model' and 'theory' are generally used interchangeably, though the latter is considered to be a more sophisticated tool than the former. 'Theory' is deemed to be composed of hypotheses and is purported to explain relationships which obtain in the real world. Nonetheless, in most of the administrative studies, the terms 'model' and 'theory' have not been differentiated on any scale of methodological sophistication.

V. Subramaniam in his article "Middle Range Models in Comparative Administrative Studies" observes that models can be designed *a*

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priori, assuming certain characteristics of human (group) behaviour or they can be abstracted from actual observed characteristics and extrapolated to stress the more important features. Subramaniam has distinguished between static and dynamic models, mechanical and biological models, and limited and comprehensive models. In such a situation of variegation, what matters most is an ingenuity to select an appropriate model for attempting a specific administrative analysis. Fred Riggs in his essay, "The Use of Models in Administrative Analysis", rightly opines that no model is inherently valid or invalid, for it may explain reality in one setting and obscure in another.

Levels of Analysis

Subramaniam observes that the first models in comparative public administration were designed by American scholars for the widest cross-cultural comparisons and were bound to be macro models—models which enable the analysts to transcend provinciality. In this category come conceptual constructs developed by Sayre and Kaufman—based on behaviour patterns of administrators—and the systemic-ecological models propounded by Fred W. Riggs—first in the Agraria-Transitia-Industria typology and later within the framework of Fused-Prismatic-Diffracted societies. Subramaniam points out that the macro models do not provide immediately useful frameworks for actual comparisons because of their broad categories and because of complexities which accrue in empirical research in the absence of adequate operational definitions of important concepts incorporated in these models.

Despite certain methodological limitations and research inconveniences imposed by macro models, it cannot be denied that these conceptual constructs help a researcher identify a large number of relevant and crucial variables that are useful for understanding administrative reality. Macro models can act as a prelude to middle range studies, for the latter can borrow concepts and hypotheses from the macro formulations.

A middle-range model would include a few factors in two or more systems which are relevant, comparable and interrelated. It would attempt to incorporate all factors of 'high relevance' and exclude all factors of 'low relevance'. Certainly, the onus will remain of empirically discovering a subset of interdependent variables. In this context, Subramaniam suggests that to build a middle-range model of three or four variables, one has to look closely into two systems at least where these variables form an independent 'subset' and then apply it to a third to round off the rough edges.

The tenability of research based on middle-range models has substantially influenced the whole gamut of administrative analysis. Among the middle-range models used in public administration, the most popular

has been the bureaucratic model based on Max Weber's ideal-typical construct, a reference to which will be made later.

Fact and Value Premises

An important methodological question in the construction of models relates to the relationship between 'fact' premises and 'value' premise. Subramaniam in another article entitled "The Fact-Value Distinction as an Analytical Tool" opines that the controversy ranging from the distinction made by Herbert Simon in his classic, *Administrative Behavior*, between facts and values has never been fully examined. As is well known, Simon had decided to shelve this element in his theory with the means-ends chain in favour of concentrating straightway on the process of choice. Recognizing the utility of fact-value distinction in administrative models, Subramaniam advocates the relating of this analytical tool to the economist's concept of probability and utility; to the role of facts about others' values in administrative decision-making process; and to the division of responsibility for facts and values between the specialist and the administrator.

Notwithstanding the location of possible areas where the fact-value distinction can usefully be employed as an analytical tool, a focus on this dichotomy is likely to create problems of empirically separating the two premises from each other. This would be particularly so in public administrative systems which function with the stated objectives of achieving certain specific goals that are rooted in the national value systems—whether expressed formally or implied conventionally.

Another important conceptual distinction made by Herbert Simon in his decision-making model related to the 'satisficing' versus the 'maximizing' man. The former category, in turn, is closely concerned with the factor of 'bounded rationality' and 'intended rationality' of a decision-maker. The extent of the application of rationality in any administrative system is a crucial factor in determining the nature of administrative action. A reference to this important point will be pertinent at this stage.

The Notion of Administrative Rationality

As H.C. Rieger observes in his paper, 'Innovations in Bureaucratic Systems,' the 'rational model' of bureaucracy, first expounded by Max Weber, assumes the existence of a formal organization operating according to standards of rationality for the attainment of specific organizational goals. The Weberian contention that bureaucracy is capable of attaining the highest degree of rationality has been criticised by quite a few scholars. But what is generally overlooked while making such criticisms is that Weber considered bureaucracy to be relatively more rational than the administrative system prevailing in traditional

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and charismatic authority systems—which formed the focus of his inquiry besides, of course, the legal-rational authority system. Clearly, Weber was not unmindful of the limitations of bureaucratic rationality in practice. This became evident in his analysis of the dysfunctions of the Prussian bureaucracy under Bismark which he had watched from close.

Sami G. Hajjar in his essay, "Towards Understanding of Concept of Bureaucratic Rationality", mentions that the existing theories of bureaucratic rationality in public administration literature do not adequately and properly define the concept. He refers to an alternate concept of bureaucratic rationality called, 'projected rationality' which is essentially a normative and subjective concept. Projected rationality indicates a decision-making process which allows for the expression of values and which points to the manner by which these values can be verified in bureaucracy. The concept prescribes what 'must be', rather than 'what is', in projected rationality prescribes to the bureaucrat, by means of a referent, the preservation of the bureaucratic structure, and by means of a norm, efficient, loyal and responsible action. Thus, according to Hajjar, a bureaucratic decision is true or right insofar as it conforms to the referent of preserving the bureaucratic structure. Second, the ability to judge a bureaucratic decision as true implies that a bureaucracy can evaluate its output internally, *i.e.*, in terms of bureaucratic norms and bureaucratic referent.

This leads us to certain other important aspects of bureaucratic theory.

Bureaucratic Theory

Max Weber's ideal-type construct of bureaucracy, depicting the structural characteristics of an administrative staff in a 'legal-rational' authority system, has been the single most dominant conceptual framework in the study of public administration. The structural characteristics focused in Weber's model include, among others, hierarchy, specialization, rationalized job structure, and the selection of personnel on the basis of merit. The Weberian construct has served a great heuristic purpose in furthering research in comparative public administration. Among scholars who have contributed to the studies of comparative bureaucratic systems are Morroe Berger, Alfred Diamant, Ferrel Heady, Robert Presthus and Michael Crozier. A few studies have been made in the context of the Indian administrative environment as well.

V.A. Pai Panandiker and S.S. Kshirsagar in their article, "Bureaucracy in India: An Empirical Study", write a few meaningful rejoinders to the prevailing theory of bureaucracy. They examine the system of Indian bureaucracy from the point of three structural characteristics, *viz.*, hierarchy, division of labour and system of rules and three

behavioural characteristics, *viz.*, impersonality, rationality and rule-orientation.

Panandiker and Kshirsagar's study supports the general contention that for comparative purposes, the study of bureaucratic structure presents a meaningful starting point. However, their analysis reveals that the structural and behavioural characteristics of bureaucracy do not have an isomorphic relationship. Of course, the functional contents of bureaucracy have a significant bearing on its behavioural characteristics which, in turn, influence its structural characteristics. The authors also point out that the structural postulates, despite being significant elements of any conceptualization on bureaucracy, are not sufficiently independent so as to permit theory building around them, therefore, it is necessary to examine structural and behavioural postulates simultaneously to formulate a more valid and useful bureaucratic theory. It has also been suggested that a generalized bureaucratic model may not be found useful in analyzing diverse administrative realities. Therefore, what is needed is a series of sub-models in which various characteristics of bureaucracy play differing roles.

Further, an important proposition suggested by Panandiker and Kshirsagar is that bureaucracies engaged in developmental tasks at the field level tend to be less structured and behaviourally more flexible than the secretariat-based remote bureaucracies and that bureaucracies involved in performing non-developmental tasks will tend to be structurally more rigid and behaviourally less flexible. Although the developmental-non-developmental dichotomy assumed by the authors may not be empirically tenable, it does however underscore the desirability to undertake deeper studies on the impact of mass contact and participation level of skilled personnel on bureaucratic structure and behaviour.

It may be pertinent to mention at this point that despite a tremendous recognition accorded to the bureaucratic model, some scholars have found it to be an inadequate instrument for studying those administrative systems where the legal-rational authority system is conspicuous by its absence. Essentially the 'real' bureaucratic systems in the developing states are so removed from the legal-rational model or the purely traditional type or even the purely charismatic type that to study them with the aid of such pure trichomotous constructs will provide misleading results.

An important point raised by Fred Riggs is that Weber's ideal-type construct of bureaucracy, because of its assumptions of a relatively autonomous administrative system, is not particularly relevant to the developing societies where the administrative structures do not have the same degree of autonomy from other social structures as do their counterparts in many of the developed societies. For these and other

reasons, Riggs has argued that there is need to develop new conceptual constructs to study societies which have a mixture of 'primitive' and 'modern' structural characteristics.

In his article, "The Use of Models in Administrative Analysis", Riggs has developed his well-known models of 'fused', 'prismatic' and 'refracted' (later changed to 'defracted') societies. These constructs, like Riggs's earlier models of 'agraria', 'transitia' and 'industria' are ideal typical formulations. An ideal-type construct serves to isolate and emphasize the more important features of a class or characteristic by extrapolating and caricaturing them. As a tool of comparative analysis, the utility of an ideal-type construct has been well recognized in public administration and other social sciences.

Among the three models developed by Riggs in his second typology, the formulation on prismatic society and its 'sala' (administrative system functioning in a prismatic society) is characterized by 'heterogeneity', 'formalism' and 'overlapping'.

It becomes clear that Weberian and Riggsian analyses somewhat complement each other. Weber described essentially the characteristics of bureaucracy which evolved as a result of certain kinds of socio-economic development (and which also contributed to that development). Riggs, on the other hand, seems to be seeking explanation of why similar bureaucratic development does not emerge rapidly in the present-day developing countries. Further, Weber's influence on Riggs in the construction of administrative models is discernible. Like Weber, Riggs provides three ideal-type constructs, which are essentially deductive in nature. While the basis of Weberian categories is the type of legitimacy associated with an authority system, Riggsian typology is based on the criterion of structural differentiation, which differs from Weber's qualitative distinct ideal-types. However, it appears that elements of Weber's legal-rational authority dominate in Riggs's diffracted society. More particularly, legal-rational authority system is characterized by a relative autonomy of structures, which is also a feature of a diffracted society. Likewise, Riggs's fused society has several characteristics of Weber's traditional authority system. Both these systems have a role-differentiation of a simple sort. However, no exact parallel of Weber's charismatic authority system is found in Riggs's typology, though some characteristics of routinized charisma can be found in empirical 'prismatic' societies such as India and Nepal. Notably, most charismatic rulers today are involved in directing certain modernizing programmes.

There is one area of conceptualization where Riggs seems to have gone beyond Weber, and that is the realm of ecology of administrative system. One finds greater awareness of the environment-administrative system interaction in Riggs's models than in Weber's typology. This

point leads us to a brief analysis of the issue of administrative ecology.

Ecology of Public Bureaucracies

The ecological approach to the study of public administration views bureaucracy as a social institution which is continuously interacting with—*i.e.*, affected by and feeding back upon—the economic, political and socio-cultural subsystems of a society. Thus bureaucracy is both a modifying influence on these environmental systems as well as a system which is modified by their activity.

Ramesh K. Arora and Augusto Ferreros in their study, "Dimensional Approach to the Ecology of Public Bureaucracies : Addendum to John Forward", have further developed the analysis made by Forward on the ecological structure of public bureaucracies. The authors had hypothesized that administrative ecology consists of four basic dimensions, namely, the enonomic, communication, socio-cultural and political. But the quantitative analysis made in the study reveals that instead of four, there are six such dimensions. These are : modernization factor, democratization factor, political stability factor, cultural integration factor, ethnic diversity factor and ideological-systemic factor. Thus the political elements appear to be pervasive throughout the ecological dimensions that characterize the environment of public bureaucracies. Even culture has distinctively political overtones.

In this context, Michael Croziers's paper, "Power Relationships in Modern Bureaucracies", assumes importance, for it examines the consequences of democratic political culture on the internal environment of modern public administrative organisations.

Crozier observes that most scholars of bureaucracies have been interested only in characterizing the formal and theoretical aspects of bureaucracy, they examine the social roles a bureaucratic system fosters, analyze the discrepancies between democratic ideals and conservative formalistic rules, but tend to neglect the study of internal functioning of bureaucratic organizations. Crozier assumes that power relationships are one of the key spots for observing human behaviour within large-scale organization and human relationships associated with bureaucracy. He formulates two major hypotheses on the basis of his empirical study of public organizations in France. First, in a bureaucratic system where attempts have been made to eliminate uncertainty, power goes to the individual or to the groups who are in control of the last source of uncertainty. And second, the separation between strata makes it possible for the conflict over power to be a fight between groups.

The environment of an administrative system also gains special importance in the essay by M. Sayefullah Bhuyan, entitled, "The Organic Model and Innovation in the Developing Nations". Bhuyan

argues that developing countries need to look more inward than outward to discover their specific administrative problems and to adopt needed reforms. He stresses the need to see the bureaucrat of a developing country in his structural context and see how organizational rules and public role expectations influence his behaviour.

This takes us to the broader issues of innovation and change in bureaucratic systems.

Innovation and Change in Bureaucratic Systems

H.C. Rieger in his essay, "Innovations in Bureaucratic Systems", observes that the future technological advances and developments in other areas are likely to have a number of important implications for bureaucratic administrations. He advocates the adoption of an open system approach for administrative analysis and argues that modern administrative systems should be viewed as information-processing systems. On this basis, Rieger attempts a distinction between stabilizing administration and developmental administration, the latter having greater initiative at lower levels, a system of upward communication and a methodical feedback system.

Sayefullah briefly refers to the 'organic' model formulated by Victor Thompson who has argued that administrative practices and principles of the west have been derived from a preoccupation with control and therefore have little value for development administration in under-developed countries where the need is for adaptive administration, one that can incorporate constant change. Innovation, observes Thompson, is the generation, acceptance and implemention of new ideas and processes. And his organic model, besides focusing on innovation, highlights 'creativity' which, in turn, involves optimal freedom, high internal commitment to the task, good mix of intrinsic as well as extrinsic rewards, flexibility, pluralism and multiple approaches to problem-solving. Further, an organic model of administration places more importance on professionalism than on bureaucracy; it stresses greater humanism in approach; it favours a pluralistic and collegiate system of control; and the development of a creative environment for greater innovation.

At this stage one is reminded of Rensis Likert's Sytem 4—Participative Group Model—which has many characteristics common to Thompson's model. But Jaideep Singh in his interesting essay, "The Enlightened Organization", goes even beyond Likert's System 4. Singh endorses the notion that successful organizations are those which make the best use of competent personnel to perform well and efficiently all the tasks required by an enterprise. But how an organization does it is the main question. An Enlightened Organization, argues Jaideep Singh, is characterized by 'spiritual mission', 'unified intentionality', 'egalitarian hierarchy', 'situational leadership', 'harmonious teams', 'relational validation', 'self-

determined self-actualization', 'entrepreneurial thrust', 'dynamic equilibrium', and 'symphonic fusion'—the last attribute implying the rythmic orchestration of all the above characteristics into the organizational way of life.

Although one can find relevance of Thompson's and Singh's models and of the 'organic populism' model of Bennis to certain organizational situations in a country such as the US, it becomes difficult to locate conditions favourable to the adoption of these models in developing nations. Bhuyan argues that the liberalism of the organic model (*e.g.*, mutual trust and confidence, greater freedom and individualism, pluralistic and democratic decision-making) are not widely rooted in developing countries. Further, primordial loyalties such as ethnicity, religion, linguistic and tribal politics often prevent the growth of social ethos of cooperation and mutual trust even among the professionals themselves.

The problem of change at the organizational level has been dealt with by Garth N. Jones in his paper, "Change Catalyst in Managed Organizational Change". Garth argues that managed organizational change represents conscious, deliberate, and collaborative efforts towards specific goal-achievement. It rests upon the basic assumption that change in organization may be planned and controlled in a systematic manner. Further, the behaviour of people can be changed and/or integrated in such fashions by the skilful employment of social science and technology so that an organization becomes more effective in utilizing its energies and resources for goal-attainment and achieves a state of dynamic equilibrium.

The question of dynamic equilibrium takes us to the subject matter of the last essay of this volume, namely, "Contingency Approach to Public Administration : A Promise for the Eighties" by Arie Halachmi. The contingency approach is concerned with the functional relationships among the different variables of the external and the internal environments and how a change in one may influence the other. The approach underscores the ever-changing nature of interdependencies and functional inter-relations. Further, it focuses on suggesting patterns of organizational designing and redesigning and on managerial actions most appropriate for specific situations. Besides, it values 'learning' as a continuous constructive process and advocates transplanting of knowledge according to the demands of specific socio-administrative settings.

It appears from the above analysis that over the past few decades, administrative theory has moved from a state of orthodoxy to a state of passionate skepticism; from a state of objective and universal postulates to a state of phenomenological view of administrative reality; and from a state of inviolable principles to a state of contingency approach. Is it progress ? We do not really know. But if poly-paradigmatism

reflects a dynamic stage of conceptualization, then at least an argument can be ventured: When the administrative reality is altogether complex, why should its explanations not be so?

RAMESH K. ARORA

CONTENTS

Middle Range Models in Comparative Administrative Studies*

V. Subramaniam

THIS PAPER is chiefly concerned with discussing some problems involved in building and using middle range models for comparing administrative systems. To do this effectively we shall first survey briefly: (*i*) how the need arose for models, (*ii*) what is meant by a model, (*iii*) what a comprehensive or macro model is and conversely, (*iv*) what a middle range model is not.

It does not take long to find out that not all comparisons are fruitful in the field of politics or public administration. As a crude example of futility, we can point to comparisons instituted on the basis of similar names—such as those between the Presidents of India and the United States or between French department and a department of the Government of India. At the next level similar-looking institutions may be compared with some useful results—as for example, the civil service commissions of Great Britain and the United States. Quite often in such cases, we discover that similar-looking institutions perform different functions and the more different the functions the less meaningful is the comparison. Even in case of institutions performing similar functions what usually passed for comparison in the decades before World War II (as American academics confessed often) was no more than the juxtaposition of descriptions (of the institutions) without much analysis. From this comparatively unsophisticated state of things, American scholars were forced in the post-war years to study and understand a multitude of foreign administrative systems different in every way from their own. Institutional comparisons were *prima facie* pointless and a total understanding of each new society was required before one could begin to make comparisons. The idea of model building was born under these conditions and derived much inspiration from models used in other social sciences.

A model has been defined as "a system of concepts (theories) in terms of which data are collected, classified and otherwise analysed

and conclusions of some sort are formulated."[1] It gives perspective and direction to the collection data. At its simplest level a model, say dealing with the difficulties of public service recruitment, may give us a checklist of (interrelated) factors, which have to be studied and measured (in two or more countries) such as the level of unemployment, the prestige of the public service, the rates of remuneration and the prevalence of graft and attitudes towards it. At another level Max Weber's description of the characteristics of a bureaucracy may be regarded as a highly generalised model made up of such interretated factors as precise relationship of one member to another, the use of rules and regulations, the use of records, regulated remuneration in cash, a hierarchy of offices and so on. Models can be designed *a priori*, assuming certain characteristics of human (group) behaviour, as some models in economics are or they can be abstracted from actual observed characteristics and extrapolated to stress the more important features. Weber's ideal type construct of bureaucracy belongs to the latter class. They may be dynamic or static, mechanical or biological, limited or comprehensive.[2]

The first models were designed by American scholars for the widest cross-cultural comparisons and were more or less bound to be macro models. According to William J. Siffin, the first need was for "models which enable us to transcend provinciality", for "models which enable the comparison of western as well as non-western administrative systems".[3] The two most widely known models of Sayre-Kauffman and F.W. Riggs[4] conform to this broad requirement, though they differ in other regards, the former being based on the behaviour (patterns) of administrators and the latter on structural-functional analysis. We shall look briefly into the latter to illustrate the nature of a macro model.

The Agraria-Industria model of Riggs is based directly on F.X. Sutton's model of Agrarian and Industrial societies. The model includes in each case a *total* picture of each society at its most intensive stage. In other words it includes an ideal type construct of each society. The intensive agricultural society is characterised by : "(1) the predominance of ascriptive particularistic, diffuse patterns, (2) stable local groups and limited social mobility, (3) relatively simple and stable occupational differentiation, and (4) a differential stratification system

[1]William J. Siffin (ed.), *Toward the Comparative Study of Public Administration*, Bloomington, Indiana University Press, 1959, p. 10.

[2]*Ibid.*, pp. 97-98. For a more detailed classification of models *also see* Fred Riggs and Edward W. Weidner, *Models and Priorities in the Comparative Study of Public Administration*, Chicago, American Society for Public Administration, 1963.

[3]*Ibid.*, p. 13.

[4]*Ibid.*, p. 11 for the Sayre-Kaufmann model and pp. 23-116 for the Riggs model.

of diffuse impact." An industrial society, has, on the other hand, the following features : "(1) predominance of universalistic, specific and achievement norms, (2) high degree of social mobility (in a general —not necessarily vertical sense), (3) well-developed occupational systems insulated from other social structures, (4) egalitarian class system based on generalised patterns of occupational achievement, and (5) prevalence of associations, *i.e.*, functionally specific non-ascriptive structures."[5] On this basis, Riggs works out logically the implications of the characteristics of each society for its system of public administration. Some of these are briefly summarised in the following table, by way of illustration.

Agraria	*Industria*
Sub-types { 1. Intensively cultivated with hydraulic works requiring a regular bureaucracy for control 2. Extensively cultivated with much local autonomy	Sub-types { 1. Free market competitive economy 2. State controlled economy
Looser control and greater non-monetary rewards to the officials.	Better control of officials through regular salary and other impersonal controls.
Prevalence of primary organisations based on family locality, etc.	Proliferation of secondary organisation based on function, interest, etc.
Strong Centripetal forces.	Strong centrifugal forces.
Recruitment of officials from limited number of classes and families.	Countrywide recruitment through objective criteria.
Prescribed traditional behaviour patterns lead to emphasis on official ritual as on differential treatment of subjects.	Emphasis on rationality in behaviour leads to stress on efficiency and pragmatism.
Conflicts settled by reference to higher authority.	Conflicts settled by the application of general rules.

This short reference to *some* important points in the Riggs model,

[5]William J. Siffin, *op. cit.*, p. 29.

brings out three of its characteristics. It is a total model, a macro model, embracing all the important characteristics of each society. Secondly, it is an ideal type construct, built by pushing to its logical extreme each significant characteristic. Thirdly, it is broadly *a priori*. Its assumptions may be derived from observation and extrapolation but the subsequent derivations are mostly made logically from the assumptions as can be seen by comparing the derivations in the table with Sutton's basic assumptions. All these three characteristics need not necessarily go together in a (static) macro model but they seem to do so usually.

It is clear that the macro model has its place and use. As an ideal type construct, it serves to isolate and emphasise the more important features of a class or characteristics by extrapolating and caricaturing them. Secondly, as an *a priori* model, it shows the *necessary* relation between its various component parts. Thirdly, it stimulates thought and focuses attention on general issues. At the same time, however, it is generally admitted that macro models do not provide an immediately useful framework for actual comparisons. For this, we require middle range models. What then are a middle range models, how do we fashion them and how far are they useful? We shall attempt to discuss these questions now.

II

We can see easily enough that a middle range model is not a macro model, that it does not deal with the total society. Ergo, it is *not* a model dealing with a society halfway between two extreme ideal type constructs. For example Riggs' model of a prismatic social system lying in between a fused system (in which a few institutions perform a number of undifferentiated functions) and a refracted system (where each institution performs a clearly differentiated function) is *not* a middle range model.[6] It refers to a social system in transition or in the middle position but as it embraces all the factors in the system it is not a middle range model.

A middle range model may, for our purpose, be looked upon as one which involves or includes only those few factors—in two or more systems which are relevant, comparable and interrelated, as against a macro model which involves a large number of factors with complex relationships among them. Thus, one may conceive of a middle range model for comparative studies of recruitment policy (in two developed societies)—which includes the level of unemployment, the output of

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[6] F.W. Riggs, *Ecology of Public Administration,* Bombay, Asia Publishing House, 1961, p. 95.

the education system, and the needs of the public service as defined by the recruiting authorities. It naturally excludes several other factors which have a bearing but only a marginal bearing. To be suitable it must include all factors of high relevance and exclude all factors of low relevance. This can be done successfully only after some acquaintance with all the factors involved and is not as simple as it appears at first sight.

However, once we have a general idea of the relevant variables, we can derive hope and assurance from the theorems of *ceteris paribus*, proved by Simon, Ando and Fisher.[7] The authors have tackled mathematically the difficulty faced by all social scientists in isolating and comparing a limited number of variables in one or more dynamic systems containing many other variables and in assuming that these others do not affect the variables studied. Their two theorems show that under specified conditions the 'other' variables can be ignored. I shall refer here only to the first one called the Simon-Ando theorem. The second, the Ando Fisher theorem is more complicated and not immediately relevant to our discussion. The Simon-Ando theorem can be briefly summed up as saying that, if the value of a set of variables (or social factors) say x, y, z in a dynamic (social) system of many variables, depends much more on their past values and only weakly on other variables in the system such as p, q, and r, then (*i*) an analysis of the subset (x, y, z), ignoring all other variables is fully valid for a short term, and (*ii*) in the long run too their *relative* behaviour is unaffected by other variables though their absolute behaviour may be. In other words, if we can empirically isolate in a social system, three highly interdependent socio-administrative factors, dependent only to a slight extent on other social or political factors, then, they can be studied validly as a set in isolation. If the same subject of three factors can be isolated in another social system, then the two sets (x, y, z), (x_1, y_1, z_1) can be compared validly, regardless of other factors.[8]

The proof of this theorem is a new achievement to be grateful for— but the theorem itself is something which practical administrators and academics had been assuming subconsciously all along and when they were conscious of the assumption, they merely hoped it was true. The proof lifts some of the needless gloom that surrounded comparative analysis. But the onus of empirically discovering a subset of interdependent variables with relatively weak dependence on others in the system still remains. This constitutes the core of the task of building a middle range model.

[7]Ando and Fisher, "Two Theorems on Ceteris Paribus", *American Political Science Review*, Vol. 56, pp. 108-113.

[8]This is not proved in the Simon-Ando theorem but it follows from it.

At this stage, one wonders whether such building is not nearly the end of the road rather than the beginning. To build a middle range model of three or four variables, one has to look closely into two systems, at least, where these variables form an independent 'subset' and then apply it to a third to round off the rough edges. After all this polishing, one may with good luck find a fourth system to apply it to, rarely a fifth and no sixth. This follows from the small number of social systems in the world with a developed administration, and the comparatively large variety of different factors that make up each system. Hence a middle range model, flowing out of empirical analysis and comparison of two or more systems, would be rather the fruit than the seed.

However, there is little need to be disappointed. The results we hope to derive by applying the middle range model would have mostly been gathered in the process of building it. Secondly, the isolation of such a subset in two or more systems, while it makes qualitative model building somewhat superfluous, also makes room for quantification and quantitative comparisons. This possibility may take some time to materialise, but when it does, it would be the real fruit of a middle range model. ☐

The Use of Models for Administrative Analysis : Confusion or Clarity?*

Fred W. Riggs

A DISTINGUISHED authority on methodology in the social sciences has written : "We are using models, willingly or not, whenever we are trying to think systematically about anything at all."[1] As used here a model refers to any "structure of symbols and operating rules" which we think has a counterpart in the real world. A circle, for example, may be used as a model to characterise the shape of a bowl or a crown. Governments are often described in terms of a model of the family, the ruler being likened to a father, the people to children. In one sense a model is simply an elaborated simple or paradigm.

If the model is well chosen, it helps us to understand the phenomena to which it is applied ; if poorly chosen, it leads to misunderstanding. Hence the degree to which our studies of public administration can lead to confusion or clarity may depend, in large measure, upon the appropriateness of the models which we employ.

Some of the readers will surely protest that it is better to go directly to the subject matter concern without reference to any model—especially if there is danger that the models chosen may be inappropriate and lead to confusion. The answer is that we have no other way of thinking about unfamiliar things except in terms of models. Suppose, for example, that you try to describe the circular shape of a bowl without using the concept of a circle! When astronomers first began to think of the earth as going around the sun, they had to think of its path as describing some pattern, and the circle seemed the most natural pattern to imagine. Later on more exact measurements led Kepler to see that the pattern could be better characterised as an ellipse. There was no getting away from models, but it was possible to substitute a model which corresponded more closely to reality for one which corresponded less closely.

[1] Karl W. Deutsch, "On Communications Models in the Social Sciences", *Public Opinion Quarterly*, Vol. 16, Fall 1952, p. 356.

In this sense a model is never true or false. Obviously a circle which does not exactly describe the path of the earth around the sun may quite accurately characterise the shape of the earth around its equatorial mid-section. Similarly we shall not find administrative models to be inherently valid or invalid, but we may expect that a model which throws light on administrative realities in one setting may simply obscure the facts in another situation.

<div align="center">AN INDIAN EXAMPLE</div>

This proposition may be well illustrated from recent Indian history. While I do not claim to be in any sense an 'expert' on Indian matters, I have read discussions of the question whether land revenues in India should be classified as 'rent' or 'taxes'. A controversy over this question was waged for many years by the British administration. In the latter part of the nineteenth century Sir Henry Maine showed, rather convincingly, why the question could not be answered. A more recent discussion of this problem by an American scholar, Walter C. Neale,[2] clearly reveals the fallacy in the question.

The dichotomy between taxes and rent assumes the existence of a market system. Only when land is regarded as a commodity subject to sale in a market, does the concept of economic rent become quantifiable. Rents can be determined by the income brought through the sale of produce and by the price brought in land sales. Although taxes may be collected in kind where no marked system prevails, nevertheless tax assessments, as imagined by the British rulers, could only be calculated in terms of an assumed values of income from the land.

The traditional system of land revenues in India, according to Neale, could be called 'reciprocative' and 'redistributive', as suggested in his title. Under this system every occupational group, the barber, washerman, carpenter, etc., performed his traditional duties for other members of the village without direct compensation. The cultivator, for his part, at harvest time, would distribute shares from his crop to the various groups in the village, as well as to Raja, who, in turn, would distribute to officials in his court, and to his own overlord. Hence a highly complex system of specialisation and mutual assistance had developed without reliance on markets, price mechanisms, supply and demand forces, etc.

If the picture drawn by Neale is accurate, then the answer to the question whether land revenues were properly speaking rents or taxes

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[2]Walter C. Neale, "Reciprocity and Redistribution in the Indian Village", in Polanyi, Arensberg and Pearson, *Trade and Market in the Early Empires*, Glencoe, Illinois, The Free Press, 1957, pp. 218-235.

was, 'neither', since they were something else. But because the model in the administrators' mind was that "All land revenue must be either rent or tax", it was inconceivable that the true situation could be 'neither'.

Had they grasped this point, they would no doubt have inquired whether they could continue to rule through a redistributive system, or whether, in their development and trade interests, the economy ought to be marketised. If the latter alternative were chosen, then the discussion would have turned to the best means of transforming the structure of Indian society and economy. In fact, of course, the society was subjected to fundamental transforming pressures, but many of these results came inadvertently as a result of new market and legal forces introduced without a full understanding of their implications for Indian traditional society.

CONVENTIONAL ADMINISTRATIVE MODELS

In the same way we cannot speak of public administration without having in mind certain models or *a priori* conceptions of how an administrative system works, just as we have ideas about how a market system works, how prices are adjusted to equalise supply and demand. In the case of administration, this basic model assumes the existence of a structurally distinct government subject to control by a political organisation, such as political parties, parliaments, public opinion, popular suffrage, interest group, etc. This political organisation, established according to a formula called the 'constitution', lays down a set of goals and policies known as 'laws' and 'regulations'.

Under the control of this organisation there is an administrative apparatus or bureaucracy charged with the tasks of implementing the laws. The bureaucracy is supposed to be politically 'neutral', *i.e.*, it does not participate in policy determination, it has no specific interests of its own, it does not exercise any important power. It is, in other words, the obedient servant of the government, and hence of the public whom government serves.

The chief questions in public administration arise under this set of assumptions. If the laws are to be carried out and if, at the same time, the resources in public funds, skilled personnel, buildings and equipment, etc., are limited, then what is the most 'efficient' way in which these scarce means can be mobilised to achieve the desired goals to the maximum extent?

When phrased this way, it will be seen that the basic model of public administration is analogous to the market model. In both instances the resources to be disposed of are considered as scarce, the goals to be accomplished as given—*i.e.*, to maximise profits or to implement policies—

and hence the objective to be the 'rational' allocation of human and material means. Both administration and economics, in other words, assume a situation in which choices can and must be made because of insufficient means.

Karl Polanyi, in the book referred to above,[3] distinguishes between 'formal' and 'substantive' economics in the sense that the former deals with the assumed market model just described, whereas the latter refers to any ways in which human beings interact with their natural and social environment so as to satisfy their material wants. From this viewpoint, substantive economics may include situations of insufficiency in which no choice can be made, and choices being made where no insufficiency exists. In other words, there may be no market for exchanges, but people may nevertheless find ways to satisfy their material needs, quite unconscious of the fact that in so doing they are behaving economically.

Similarly, we may have administrative behaviour without, in any sense, having the rational administrative model set forth above. Let us assume that there is no political organisation to formulate policies. Suppose the existence of a king who may be regarded as a divinity with religious functions, a judge to make choices in individual cases, a war-leader, etc., but not a 'policy maker'. Under these conditions, a set of officials may exist each of whom repeats, on a smaller scale, the same kind of activities as the king—judging cases, moblising war bands, and symbolising divine harmonies. No policies are made or implemented. No administrative apparatus exists independently of a political machine. Yet one could not say that there is no 'government'. Somehow, public order is maintained, minimal public services are provided, the people have a sense that they live in a social order, not a chaos. Surely here some kind of 'administrative' process is at work, but not in the formal sense described above.

SUBSTANTIVE *VS.* FORMAL ADMINISTRATIVE MODEL

May we not apply to administration the same distinction that Polanyi applies to economics, namely, the difference between 'formal, and 'substantive' administration ? Just as formal economics assumes a price-making market, so formal administration assumes a policy implementing 'bureau'. The bureaucrat is to the formal administrative bureau as the entrepreneur is to the formal economic market.

But substantive administration can take place without a bureau, just as substantive economics need not presuppose a market. Without policies and bureaucrats, nevertheless the work of government

[3]Polanyi, et, al., *op. cit.*, p. 246.

can be done. No doubt traditional government cannot build railways, operate airlines, maintain agricultural experiment stations and public hospitals, but neither does traditional economics provide automobiles, radio stations, sewing machines, and mass-produced textiles. Human survival is quite possible without these things, but it is not possible without substantive administration and economics, *i.e.*, the provision of minimal social order, food and shelter, etc.

The purpose of this argument is not, of course, to discredit the study of formal administration, any more than one would wish to abandon the study of formal economics. Indeed, the existence of modern, highly industrialised and productive societies, may be possible only on the condition that bureaucratic and market systems of the type indicated be established. It is one thing to talk about the creation of such systems, and how they might work, and quite a different thing to assume that they do exist in actual societies, and act as though that existence had been proved. But that precisely was the British experience in setting up a revenue scheme as though Indian traditional economy were already marketised.

The object of my remarks is merely to indicate that where the 'model bureau' does not exist, it is futile to ask questions about what does exist as though it were a 'model bureau'. The first task is, obviously, not to make this assumption but to ask, "What does in fact exist ?" One may discover, of course, that what exists is not at all a bad thing. I am sure many Indians think the traditional redistributive system superior to a market system, that many prefer handloomed *khaddar* to factory manufactured textiles, not because the material product is superior but because the traditional way of life is more gracious, humane, or orderly than the hurly-burly of factory and the higgling-haggling of market. Similarly, one may discover to his surprise that the traditional way of substantive administration has much to recommend it, even though it does not contain a policy-implementing bureau.

At least one English administrator and scholar came to admire the traditional administrative system and prefer it to the modern bureau. Explaining the old Fijian system which he had personally observed, he observed that the people's "offering to the chief is even better than a charity bazaar; it combines a trip to town with glimpses of royalty, a display of food and manufactured articles, dances, a hearty meal, flirtations. Added to all this is the expression of loyalty to the father of the people, the hero-worship."[4] From the offerings received, of course, the king not only maintained a sumptuous establishment in which everyone could take pride, but also distributed gifts and rewards to those who

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[4] A.M. Hocart, *Kings and Councillors*, London, Luzac, 1936, p. 203.

needed help or who served him.

Under foreign rule, however, the traditional system of tribute offerings to the king had been replaced by the idea of tax payments to government to finance public services. The result, according to Hocart, was to dampen the enthusiasm which had formerly sustained the people in their efforts. "They were left without an aim in life beyond eating and drinking; they reduced their output of work to fit the contracted aim; fields, ships, houses, everything dwindled with the dwindling pomp." In India, too, there are surely some who look on the durbar as a glorious focus of social and religious as well as political life.

The crucial question at issue today, however, is not the traditional *vs.* the bureaucratised way of government. In the modern world, we have to find ways to survive and to protect our most precious values. To do that, it is no longer possible to rely on traditional economic and administrative methods. But neither can we assume the existence of the model market and bureau, however much we might regard it as necessary or desirable. We must first find out what kind of administrative system we actually have. Polanyi and Neale found that the traditional economic system could best be described as reciprocative and redistributive. Can we find words to identify the kind of administrative system we now have in reality? I think we can, but to do so we shall have to resort to some new words and concepts which cannot be found in the conventional literature on public administration.

PRESCRIPTIVE *VS.* DESCRIPTIVE MODELS

Before making a few suggestions along this line, let me point out one other characteristic of the conventional model of public administration. Just as formal economics presupposes a rationalising market goal, so formal administrative theory presupposes, 'efficiency' in policy implementation as a normative goal. In other words, administrative theory is not only asked to tell us what now exists, or has existed, but also what should exit. Indeed, the emphasis in much administrative literature is rather more on the prescriptive than on the descriptive side. The so-called 'principles' of public administration take the following form: "Authority should be commensurate with responsibility"; "Staff functions should be clearly separated from line functions"; "The span of control should be . . . "; "Communications should flow upwards as well as downwards"; "Equal pay for equal work"; etc.

Again, I have no intention of questioning the usefulness of such maxims. I wish only to point out that prescriptions which are valid in one context may be harmful in another. Where penicillin may cure one patient it may kill another. As the old proverb says, "One man's

meat is another man's poison." Hence the first question we should always ask ourselves when confronted with one of these maxims is not, "Is it true?" but rather, "Does it apply to this case?".

Now, I strongly believe that we cannot answer the question of applicability unless we know a good deal about 'this case'. In other words, we need a pretty complete descriptive and analytical understanding of what now exists before we can make very useful judgments about what we ought to do, what changes should be made. The model of administrative behaviour, as of economic, was inspired by some understanding of western societies in which markets and bureaus existed and corresponded, at least approximately, to the image conveyed by the model. We are not to assume, however, that the position in India can be properly described in these terms, although it may sometimes be tempting to do so.

The temptation to accept these models uncritically arises in part, at least, from the lack of alternative models—the British administrators who puzzled over the land revenue question would surely, have taken a different view if it occurred to them that there was an alternative to the rent-tax dichotomy. When the redistributive model is offered, the possibility of this alternative immediately becomes apparent.

Similarly, the possibility of describing administrative reality in terms other than the formal administrative bureau and the efficiency criteria arises only when alternative models become available.

ALTERNATIVE MODELS?

The position today differs from that of the nineteenth century in too important respects. On the one hand, we have developed rather more sophisticated theories, and so it should be easier to find alternative models than it was a century ago. On the other hand, the need for alternative models is not so apparent. Whereas a centruy ago, the contrast between the traditional Indian economy and the market system was sharp, today the market has widely pervaded Indian society, and the market mode of analysis is relatively far more applicable. Similarly, the establishment of the Indian Civil Service and the many other Indian services has created something quite similar to the model of the administrative bureau. Why, then, is there any need to consider alternative administrative models in the study of Indian government?

The answer, I think, lies in the fact that the new market and administrative systems have *displaced* but not *replaced* the traditional systems. In other words, even though the market has invaded the village, I doubt that it has fully eliminated the old redistributive system. At least recent village studies by some anthropologists tend to show that

the old system retains a firm grip. Similarly, if the administrative bureau model holds at the level of the IAS, does it also hold at the level of the village panchayat?

HETEROGENEITY

Would it be justified to reach the conclusion that the existing situation is a mixed one, partially resembling the administrative bureau but partly resembling also the traditional chief? The mixture can take place on several dimensions : first the urban-rural dimension stretching from Bombay-New Delhi-Calcutta to the remote hill tribes, with 'village India' lying stretched out in between : second the class and community dimension stretching from the university graduate and administrative officer to the illiterate and the mystic. Let us call such a broad mixture of attitudes, practices and situations 'heterogeneous'. To the extent that heterogeneity prevails, a model which characterises only one element in the mix, however important that element, cannot be regarded as an adequate model for the whole.

May we assume that Indian substantive administration is quite heterogeneous, and hence draw the conclusion that, however applicable, the formal model may be to part of the Indian governmental scene, it cannot comprehend the total scene? By the same reasoning of course, the model of traditional India—whether in its economic or administrative aspects—cannot be taken as a reliable guide to modern Indian conditions, however much the traditional systems may survive in segments of Indian society.

OVERLAPPING

Another aspect of the conventional administrative model may be worth noting. In some ways this model is like a clock. Whatever the size or shape of a clock, it has a single function to perform, namely, to signalise the passage of the hours and minutes with precision. If a clock stops or runs too slowly or too fast, we can consider the mechanism defective. It may need to be wound, to have a spring repaired, to have the timing mechanism adjusted, etc.

In the same way the administrative bureau is considered to have a single function, to implement laws. If the laws are poorly enforced, if corruption creeps in, if the public is abused, etc., we examine the 'pathology' as we would of a defective clock. The apparatus needs to be 'set right'.

Just as we employ a clock repair man to fix the clock, we hunt for an administrative specialist to tell us what needs to be done to make the administrative apparatus work right. It may be the examinations

for recruitment to the service should be improved. Perhaps the system of budgeting needs revamping, a position classification scheme might be installed, salaries readjusted, public relations officers set up, better book-keeping or filing equipment acquired, communications bottlenecks eliminated, etc.

To some extent this model is justified in the industrialised countries where the model was developed. Insofar as the political demand for services is well organised and policies are clear-cut and positions outside government are more remunerative and prestigeful than posts inside, it is possible to recruit for specialised positions at various levels of the public service through technical examinations. One can treat problems of recruitment and promotion as largely autonomous, as technical and managerial, as questions which can and should be resolved solely by administrative criteria.

Where these conditions do not exist, however, other questions must be brought into view. If opportunities for employment outside the bureaucracy are limited, terrific pressure for public posts may arise. Powerful family influences may be brought to bear. The number of posts may exceed the capacity of the public budget to pay adequate salaries to all. The incumbents may become powerful enough to influence policy formation as much as the politicians to whom they are nominally responsible. A change in one aspect of such a system has unpredictable consequences in other parts.

To revert to the clock model, let us suppose the existence of strong electric vibrations between the clock, the radio, and the refrigerator in a room. The clock, having begun to lose time, I call in a repair man who sets it right. I then discover that the change in the clock has affected the radio. When the radio is adjusted, it has a bad effect on the refrigerator, which no longer keeps food cold enough. When the refrigerator is fixed, I discover that this has now caused the clock to gain. Every subsequent manipulation of one apparatus seems to disorganise another.

If this seems far-fetched, it helps to explain why the clock model misleads us as a way of thinking about the administrative system. Even in the most developed countries, the administrative system is not as self-contained or autonomous an 'apparatus' as a clock. In traditional agricultural societies it is virtually impossible to detach administration as a 'system' from other aspects of the society. It is only possible to view administration as an 'aspect', although an important one.

In societies which are in course of industrialisation and modernisation, where a heterogeneous mixture of the new and the old exists side by side one sometimes has the impression that administration can be viewed as having a clock-like separateness, but this impression is surely misleading. Indeed, one of the characteristics which we might add to

our model of a country in process of modernisation is 'overlapp ing'. By this I mean that the new formal apparatu;, like the administrative bureau, gives an illusory impression of autonomousness whereas in fact it is deeply enmeshed in, and cross-influenced by, remnants of older traditional social, economic, religious, and political systems. Hence tinkering with administrative regulations and establishments is bound to affect these non-administrative systems, and reciprocally, economic and social changes will also affect the administrative system. Any attempt to understand public administration under such circumstances must, therefore, be based on a study of the overlapping interrelationships as well as the internal mechanism of the administrative structure viewed as something apart.

FORMALISM

This phenomenon of overlapping is related to another element which I would also add to our model. If you set out to go to a strange house, you may try to follow a city map which tells you what streets to take. But if the map is poorly drawn, you find the streets you have chosen lead you to unexpected places, while the house you seek cannot be found. Such a map is misleading because the shape or direction of the real streets does not correspond to the form of those shown on the map. Hence we may call such a map 'formalistic'. Its forms do not represent reality.

Similarly, a time-table for trains which is formalistic might mislead you into taking the wrong train, or missing your connection. A law which is formalistic sets forth a policy or goal which is not, administratively, put into practice. Social behaviour does not conform to the prescribed norm. Thus legalistic administration is a particular kind of formalistic system. If you find an organisation chart which purports to describe the structure of a government department, with elaborate statements of the duties of each unit and post in the department, you will hold this chart formalistic if you find the real people and units in the department doing different things from those mentioned in the chart.

When a high degree of overlapping in administrative organisation occurs, considerable formalism is also to be expected. Legislators may adopt a particular law, for example, only to find it cannot be enforced by the administrators. To insist on enforcement may set in motion secondary effects which are contrary to the declared intent of other laws. A legislative change in inheritance, marriage rights, or contract obligations, for example, may disturb, if enforced, prospects for maintaining the peace, implementing the economic development plan, or gaining support for community development.

Again, because of heterogeneity, changes which may work quite

satisfactorliy in the cities might prove disruptive in the villages, reforms that are welcomed in the North might be strongly opposed in the South, a reorganisation acceptable to one part of the public service might prove unacceptable to another part.

Formalism adversely affects our ability to deal with administrative reality by means of the clock image, just as overlapping does. In the United States it is now the general practice in much of the country for everyone to set his clock ahead one hour each spring. We call this "day light saving time". Some farmers make fun of the practice, saying we cannot increase the number of hours of daylight by changing the clock. Of course, the intention is merely to induce habit-bound city dwellers, who always rise at 7.30 and go to the office at 9.00 to start the day an hour earlier, during the summer. It is easier to do this by manipulating the clock than by inducing everyone to start work at 8.00.

We can imagine the fate of an individual who, upon over-sleeping decides merely to set his clock forward an hour and then go to work on his own new "double-daylight saving time". He claims to arrive at the office at '9.00' by *his* clock, but his supervisor will nevertheless reduce his wage for coming an hour late. Such a manoeuvre would be called formalistic, because it would set up an appearance contrary to reality. Reality, in this case, is obviously determined, not by the position of the sun, but by simultaneous position of everyone's clock, which has become an instrument for synchronisation rather than for determining astronomical position.

Now this example may help us to understand the dilemma of the administrative reformer. Suppose he tries to set the administrative apparatus right, but discovers later that he has merely re-arranged the organisation chart without affecting the behaviour of people in the department. The more formalistic an administrative situation to start with, the less effect on behavioural change in the prescribed norms will have. By contrast, if a system is highly realistic, this realism can be achieved only by continuous attention to maintenance of the correspondence : officials strive to achieve fully the set policy and goals, and the policy makers try to limit their decisions to objectives for which the necessary resources are available and sufficient support already exists. Consequently a change in the system is generally followed by corresponding changes in behaviour again because people are accustomed to following the prescribed rules, and the policy-makers do not set up impracticable rules.

These two conditions do not prevail when a legal or administrative system has become formalistic. The people subject to regulation have become indifferent to the prevalence of non-conformity with policy, and the policy-makers, exasperated with an intractible situation, hope to set it right by drawing up more rules and passing more laws, which remain as formalistic as their predecessors.

An example of formalistic reform may help to clarify this point. Suppose we find a chaotic filing system in a central government bureau. We decide that what is needed is new equipment, an improved classification scheme, trained file clerks, and revised regulations. After these changes have been made, we discover that little improvement results, although our model leads us to think that these reforms would put things right.

We push the matter further and discover that the reports which are filed are badly out of date, compiled in response to an antiquated questionnaire, and completed by unqualified clerks who provide inaccurate information. Consequently, the higher officials find them useless and don't brother to read them. Since the offices which prepare the reports know they won't be read, they see no need to invest effort in improving the design of the questionnaire or providing better replies to the old ones.

This situation, of course, means that there is little or no demand for reports from the filing section, and, therefore, no incentive for the clerks to keep the reports in good order. Moreover, since the higher officials do not read the reports, they cannot set up criteria for throwing away unneeded materials, and hence the clerks dare not discard anything, since they are personally liable for losses. The files, then, become the repository of vast accumulations of unused reports, a situation, which can scarcely be corrected by new filing procedures and equipment.

The existence of such a situation must seem paradoxical because, surely, the central office must want to learn what its subordinate units are doing. We next learn that significant communication largely takes place through oral interviews rather than through the mountainous accumulation of paper. The reasons and consequences of this would take us far afield into the nature of the personal relationships between these officials, the content of their communications, etc. It may be found that what they have to say to each other could not be put on paper because it concerns office 'politics', loyalty and disloyalty to cliques, the disposition of extra-legal perquisites, etc. Perhaps, also, the policies to be implemented by the bureau are not clearly defined so that significant questions designed to obtain data relevant to administration could not, with the best will in the world, be properly framed.

The example chosen is perhaps extreme, and may never occur in India, but it should illustrate the dilemma of the administrative technician—the records management specialist, let us say—when called upon to correct the evils of a chaotic filing system in a formalistic bureau. The most modern and scientific procedures and equipment will scarcely remedy the situation.

In societies where formal economic and administrative models provide relatively accurate images of reality, it is practical to study

the models, including, on the administrative side, laws and regulations, since these provide good evidence of practice, and changes in them are followed by corresponding changes in practice.

But where the formal models are far from reality, such study of legal and administrative models becomes increasingly 'legalistic', _i.e._, it provides a less and less accurate picture of reality and an increasingly ineffective technique for changing it. Unfortunately, the more formalistic a system, the greater the pressures which induce scholars to limit themselves to 'legalistic' studies. It is easier to study books or maps which purport to describe the world in simplified terms than to look directly at the highly confusing and heterogeneous facts themselves. Secondly, it is easier to test for knowledge of the formally prescribed than for understanding of the more complex existentially real. Thirdly, what people really do is often unpleasant, embarrassing, and even dangerous to know, and hence carefully concealed, whereas what is prescribed is usually what people in authority approve and everyone is urged to learn.

From these considerations we can see that the problem which can perplex an administrative reformer is not only his inability to see the facts of a situation to understand what ought, technically, be done to remedy it, but also his inability to figure out a way to make any real impact on the situation. As in the fairy tale, he may elaborately create a suit of clothes for the emperor which leave him as naked as before—and everyone joins the conspiracy of illusion to declare how resplendently the emperor is now dressed.

THE PRISMATIC MODEL

To return now to our initial problem : what kind of models can we offer to place alongside the conventional formal model of public administration. I think we can well use two such models, first, one for traditional societies in which administrative processes do not have any separate structure of their own, but constitute part of general, undifferentiated social structures. The second is a model for transitional situations between such an undifferentiated society and one in which the formal administrative bureau makes its appearance. As we have seen, this transitional model might be characterised by considerable heterogeneity, overlapping, and formalism.

We need some more precise terminology for these different models, and cannot find any familiar terms that exactly suit our purpose. Consequently I take the liberty of appropriating some words from the physical language of light. We know that all the colours are fused together in white light. If we imagine one of the colours—say red—to symbolise the administrative process, then fused light contains red but not in any separate, recognisable form. Consequently I will call

the traditional model 'fused,' thereby implying that it contains an administrative process, but not in a distinguishable form. There is substantive but no formal administration.

When light has been refracted, however, red appears clearly marked at one end of the spectrum. The formal administrative bureau, then, appears in a fused model, as does the formal economic market. The model, of course, is not real, any more than a 'circle', say, is a real thing, but it may be used to help us describe and think about real things, just as we can use a circle to depict the shape of the sun or a clock's face.

When light is changing from fused to refracted it passes through a prism, and hence we might call an intermediate model between the fused and refracted, 'prismatic'. We can summarise what has been said above by remarking that the prismatic model is characterised by considerable heterogeneity and formalism, whereas both the fused and refracted may be quite homogeneous and realistic. As to differentiated structures, these appear as separate and relatively autonomous entities in the refracted model, completely undifferentiated in the fused, but overlapping in the prismatic.

CLASSIFICATION OF REAL SITUATIONS

Now, it should be obvious that these models give us tools for analysis, but do not purport to describe any particular situation. Certainly even the United States or England, which are quite developed politically and economically, do not have administrative and economic structure—bureaux and markets—exactly like those portrayed in the formal refracted model. Nor do we need to imagine that any traditional folk society ever had the complete non-differentiation of economic and administrative structures described in our fused model, and certainly different traditional societies vary a great deal in the degree to which they could be described by this model. In the same way, the circle may give us an approximate image of the path of the earth around the sun, but an ellipse gives us a better image. A model helps us to describe, but it must not be hypostatised into something that we imagine has an independent reality of its own.

As to the use of the prismatic model, here the greatest amount of variation in real life is to be expected. No society can be expected to fit the prismatic model exactly. It may help us to think of the fused to refracted models as positions on a scale as follows :

fused	*prismatic*	*refracted*

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21

These terms now appear merely as convenient ways of blocking off large sectors on the scale. We could divide the scale into as many sub-categories as we wished. For example, we might want to talk about a position from 7 to 10, as 'semi-prismatic', and a position from 15 to 17 as 'semi-refracted'.

As we refined our techniques, we might eventually be able to classify individual countries at different positions on such a scale. Undoubtedly if we take Thailand, the Philippines, Egypt, Japan, Spain, Brazil, Yugoslavia, etc.—and we might place India somewhere also on this scale—we would imagine a central tendency for each country falling at a unique place on the scale. I make no attempt here to indicate where on this scale India, or the United States, for that matter, might be placed.

It is important to remember that heterogeneity is one of the salient characteristics of the prismatic model. Thus, within the same society we expect to find a wide diversity of sub-types. If the average tendencies for India as a whole were to be placed at some intermediate point on this scale, the tendencies of some parts of India, Bombay or New Delhi, for example, would surely be placed much nearer the refracted pole, and parts of Assam would surely fall nearer the fused pole.

Their consideration leads us to another advantage of this way of thinking. We need not imagine that a great, complex country and society like India can be nearly pigeon-holed in terms of an index number. Taking India as a universe for study, you might try to classify the various states, regions, or localities in terms of such a scale, and I would expect considerable variety in the scores assigned to different units.

Even the most refracted countries contain great differences between their internal zones. No doubt greater homogeneity exists within America than within India, but great diversity is still apparent as one travels from Boston or Minnesota in the North to Atlanta or Montgomery in the South. The probate judge in some southern countries still plays a politico-administrative role reminiscent of that of a traditional monarch.

DIRECTION OF CHANGE?

This framework of analysis is not intended to imply any kind of technological determinacy. If any society can be classified in terms of its position on the fused-refracted scale, this need not suggest that it is bound to move from one position to another. It may happen, of course, that a society does in fact change, over a period of years, from one position to another, but this is determined by concrete historical forces which are not given by the foregoing analysis.

I do believe that in the presence of the industrially developed countries of the world, it is becoming increasingly difficult for traditional societies to retain their ancestral forms of social organisation. The universal desire to avoid sickness and the availability of new public health techniques, to cite but a single example, will surely lead to rapid population growth that must cause declining living standards unless productivity is increased. The reader will think of other changes, the impact of scientific technology, the spread of literacy and mass communications, etc., which stimulate increasing refraction in most contemporary societies.

All of these forces, while influencing the degree of refraction, cannot be predicted from the models we have set forth. But given a knowledge of these forces, we may be able to judge whether a given country will, at any particular time, tend to become more or less refracted, or remain stable and unchanging in social and governmental structure for a period of time.

WHAT KIND OF CHANGE?

A second caution is related to the first. If the scale of refraction gives no prediction by itself of direction of change, it also by no means exhausts all the important variables that ought to be brought into any full social and governmental analysis. For example, the degree to which power is centralised or de-centralised is one of the crucial political variables. This variable is of great importance to the individual since it affects the relative freedom and security of his life. It is a variable which, so far as I can see, operates independently of degree of refraction. Thus a fused model could be centralised or de-centralised; and so could a refracted. Obvious counterparts in real life suggest themselves. Traditional societies vary between the centralisation of military and bureaucratised empires, and the de-centralisation of feudal and tribal societies. India, as I understand, its history has oscillated between the centralisation of Maurya, Harsha, Mughul and British rulers, on the one hand, and intervening periods of political fragmentation, on the other.

The balance between centralising and de-centralising forces remains an important variable in modern industrial societies, as we shift our attention from authoritarian and totalitarian states to liberal and democratic ones. It might be observed, however, that for a refracted society the crucial variable may be not so much degree of centralisation in a territorial or geographical sense, as degree of concentration of control over diverse, specialised functions. The most significant difference between totalitarian and liberal regimes is not, therefore, the variation in degree of territorial centralisation but rather the

difference between the relatively concentrated pattern of totalitarian organisation, and the dispersed pattern of liberal organisation.

It should be clear, however, that the administrative model of the government bureau applies to any refracted society, whether totalitarian or democratic. In the former case policy may be formulated by a single party or its central committee, but the bureaucrat is called upon to translate policy into behaviour in the dictatorial as in the democratic regime. The same may not be said of the formal economic model, since the market clearly plays a more important role in the liberal system than in the totalitarian. There the redistributive model might be employed more fruitfully to characterise a system of state enterprise and distribution, with the market playing a more restricted part.

There is no need here to discuss other independent variables which need not be correlated with degree of refraction, but I wish merely to make clear that, while the conventional administrative model can be readily used only in a refracted society, I do not wish thereby to imply that every refracted society would be an exact replica of every other. Consider only one other illustration—religion. Max Weber has expounded a famous thesis relating the rise of European capitalism—and therefore of industrialism—to the Protestant Reformation. This may be quite true historically, and yet it is apparent that Catholic, and also non-Christian societies, can industrialise, the example of Japan providing a striking proof. This is a good reason for using a term like 'refraction' in preference to a more common expression, like 'westernisation' or even modernisation.

For some, westernisation may include, for example, christianisation, whereas refraction clearly need not involve any particular change of religion, although it may imply a change in the role of religion in society as it becomes one among a set of differentiated structures rather than an intrinsic component of a fused whole. If India, for example, were to carry out a thoroughgoing refraction, one might anticipate the development of Hindu denominations and churches paralleling Protestant forms of organisation, but no general shift from Hindu to Christian symbols and beliefs.

For some people modernisation may also suggest adoption of American jazz, chewing bubble gum, or playing with hoola-hoops. Such matters may be transmitted more easily by means of modern communications, but they have nothing to do with essence of refraction and the relevance of the formal administrative bureau. Similarly it matters not whether, in setting up a system for records management in government offices, one borrows a British, American, German or Japanese code, or invents one for home use. No doubt it will be more convenient to standardise on a single code than to use a mixture. Any refracted administrative system will find it necessary to employ

elaborate codes, filing and communications systems, but will not have to use any particular code or filing system.

We return then, to the proposition with which this essay began, namely, that we cannot see nor deal with any situation except in terms of models, and hence, in the study of public administration, it behoves us to find or develop the most appropriate models for use in the particular situation in which we find ourselves.[5]   □

[5]The reader who wishes to pursue this subject further may find a preliminary statement of the differences between fused and refracted societies and administration in the author's "Agraria and Industria", in William Siffin, (ed)., *Toward the Comparative Study of Public Administration*, Indiana University Press, Bloomington, Indiana, U.S.A., 1957. More recent articles by the author which develop the prismatic model are "Prismatic Society and Financial Administration", *Administration Science Quarterly*, June 1960; "A Model for the Study of Philippine Social Structure" in the *Philippine Sociological Review*, and two articles in the January and April 1959 issues of the *Philippine Journal of Public Administration*.

The Fact-Value Distinction as an Analytical Tool*

V. Subramaniam

THE CONCEPT of decision as a logical compound of fact and value propositions was first popularised by Simon in his *Administrative Behaviour* in 1945. But this part of his theory soon fell into the background, mainly for two reasons. In the first place, when the distinction was criticised by several academics as reviving the old unreal politics-administration dichotomy, as obscuring values and as misleading decision-makers, Simon did not care much to answer these criticisms in detail.[1] Secondly, he shelved this element of his theory along with the means-end chain somewhat early in his discussion and rather unceremoniously in favour of concentrating straightaway on the process of choice. In doing this, Simon was instinctively right in terms of practical psychology. At the time of decision, the decision-maker is intensely aware of the element of choice—and the obligation to choose one thing to the exclusion of other things. The feeling of agony associated with choice by many[2] is partly a by-product and symptom of the obligation to exclude. This agony as such is glorified as the symbol of the basic moral commitment of human existence by the existentialists. In the context of this agony, it is perhaps rare for the majority of human decision-makers to make conscious use of the fact-value distinction. Hence, studies of the actual decision-making process concentrate on the mechanism of choosing or problem-solving in terms of its steps, such as search and comparison, and of its criteria, such as maximising or satisficing.

The non-use of the fact-value distinction by many decision-makers is, however, no argument against its effective use by academics as an analytical tool in regard to decision situations and decision phenomena. Our contention is that it has been neglected in that capacity for the

[1]To my knowledge, the only published paper which attempts an answer to these criticisms is mine, *i.e.*, V. Subramaniam, "Fact and Value in Decision-Making", *Public Administration Review*, Washington, Vol. XXIII, No. 4, (Dec., 1963).

[2]W. J. M. Mackenzie, "Models of Collective Decision-Making", *International Study of the Main Trends of Research in the Sciences of Man*, U.N.E.S.C.O./S.S./41/ 3.244, 1/4/18, 1966 refers to the agency that cannot be wished away.

foregoing wrong reason and can, in fact, be very illuminating when properly used. In this article, we illustrate its use as an analytical tool by relating it to:

(*i*) the economist's concepts of probability and utility;

(*ii*) the peculiar difficulties that blur the fact-value distinction in public administration;

(*iii*) the specialist-administrator conflict and dialogue; and

(*iv*) the extensive employment of management tools in decision-making.

PROBABILITY AND UTILITY

The concepts of probability and utility are of interest to us as they directly connect the fact-value pair to the process of choice and are so used by economists widely, in teaching and practical advising on economic problems. The term probability refers to the (mathematical) probability of a particular resultant event or consequence and the term 'utility' signifies quantitatively its value or utility to the decision-maker vis-a-vis other events. The product of these two, for any resultant event is the measure of its final or net utility—and the economic decision-maker is expected to choose that (resultant) event with the highest net utility. The best example of this is betting by a scientific punter, who is expected to estimate the probability of any horse winning—say *p*—by studying its form and measuring its utility—say *u*—through the odds offered and to compare the product *p.u.* for all horses before placing his bets.[3] It is clear that the probability-utility pair, thus, helps *directly* in the act of decision on the condition that both can be estimated quantitatively.

We can show that this pair is closely related to the fact-value pair. A fact statement normally relates to something which has already happened and so it is either 100 per cent true or 100 per cent false. Its 'probability' is, thus, either unity or zero. The probability of the

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[3]For example, there are three horses, Today, Tomorrow and Dayafter, the odds offered being 2 to 1, 5 to 2 and 7 to 3 respectively. The probability of each winning, let us say, is $\frac{1}{2}$, $\frac{1}{3}$ and $\frac{1}{4}$ respectively. Then the net utility is given by the following table:

Horse	Utility, i.e., odds	Probability	Net Utility
Today	2	$\frac{1}{2}$	1
Tomorrow	$\frac{5}{2}$	$\frac{1}{3}$	$\frac{5}{6}$
Dayafter	$\frac{7}{3}$	$\frac{1}{4}$	$\frac{7}{12}$

Naturally, Today is chosen by the punter.

economist relates to a future happening—with a probability varying from 1 to 0. But both fact and probability belong philosophically to the same category. Moreover, the distinction between a past fact and a future, probability becomes less sharp if we remember that: (*a*) probabilities are usually estimated by a projection of past events into the future, and (*b*) the fact statements used by Simon are themselves 'general' statements with a high probability rating rather than being particular facts.[4] Furthermore, the probabilities which are calculated from past events do not take into account the decision-maker's proposed behaviour.[5] In real life decision situations, however, the probability may be affected by such behaviour. In short, the concepts of fact and probability are pretty close to each other in a decision situation.

Value and utility are *prima facie* much closer, the latter being simply a quantitative measure of the former vis-a-vis another value. The philosopher's concept of value is usually an all or nothing affair as against their comparative measuring by the economist. In practice, again, it is often difficult to get even ordinal listings of different utilities, not to speak of cardinal measures. To sum up, the probability-utility pair is essentially an attempted quantified version of the fact-value pair to which it is closer than is indicated by verbal definition.

This very attempt at quantification helps to bring out the mutual influence of probability and utility. In an actual decision situation, the subjective probability as estimated by the decision-maker is what matters—not the objective probability as calculated by a neutral mathematician. The former, in the *very long run*, gets closer to the latter according to several studies, but in the short run it would be strongly influenced by the utility factor.[6] In common parlance, optimists tend to rate high the probability of a (favourable) event of higher utility while pessimists err in the opposite direction. This mutual influence becomes more complex when decisions are taken on behalf

[4]Simon's famous example in *Administrative Behaviour*, Free Press Paper back, 1965, p. 48, includes two fact statements namely: An attack is successful only when carried out under conditions of surprise; and the conditions of surprise are concealment of the time and place of attack. These two are clearly general statements with a high degree of probability. In fact, one can argue that absolute facts, which are simply *a priori* definitions, are normally useless in decision-making and only inductively-derived high-probability general 'facts' are useful therein.

[5]This is only making explicit the assumption in the statistical calculation of probability from past events.

[6]Regarding subjective probability, the work of Professor Cohen and others suggests this gets closer to objective probability after several attempts—in the case of gamblers. In the first attempt, this is more likely to depend on temperament.

of many by a few as in a democratic polity—by an administrator or politician in office.

Facts About Other's Values

Thus, a decision in public administration involves two types of facts or probabilities, namely, (*i*) more or less, absolute facts about existing material resources, their extractability and employment under given restrictions, and (*ii*) estimated probabilities concerning the opinions of separate interest groups and the whole public, in a general way, as well as in regard to the specific problem discussed. In other words, the latter type of fact is concerned with the values, however vague, held by others or it is a *fact about value*. Decision-making in a democracy becomes more complicated to the extent to which : (*a*) such facts or probabilities about other people's values remain basically incalculable, and (*b*) no final allocation of authority can ever be made to any one body to decide about other people's values. As traditional bodies, such as parliament or even cabinets, prove less and less adequate to cope up with the fast-increasing number of occasions for such decisions, two complementary developments take over. On the hand, civil servants are asked and expected to decide on other's values (of the sectional, or whole public). On the other hand, several interest groups organize themselves to make public their values.

There are two further complications arising from the mutual influence of values on one another and the mutual influence of facts and values. Thus, democracy involves the freedom to persuade others to change their values to coincide with one's own. A decision-maker in authority, thus, operates over a long continuum—stretching from a struggle to find out the facts about other's values in combination with one's own value-neutrality to a concentrated attempt to persuade other's to accept one's own value without any corresponding effort to find out theirs. In this continuum, the fact-value relation becomes rather complex.

This may be better represented by a graph with the *X*-axis representing increasing effort to find out other's values and the *Y*-axis representing increasing commitment to persuade others to one's own value orientation. A public administrator or a politician may take any position—among the infinite possible relations between fact (about other's values) and (one's own) values—in the quadrant (*see* next page).

Secondly, some desirable values enter the realm of administration only when a patient assemblage of facts and probabilities proves their achievability. Thus, values connected with social welfare entered serious administrative discussion only after Beveridge's garland of facts and figures proved them possible even though they had been advocated for long as desirable by left-wing idealists. Similarly, pro-

gress in increasing the total feeling of security in western society was made possible more by acturial calculations than by pleadings about the value of security itself.[7]
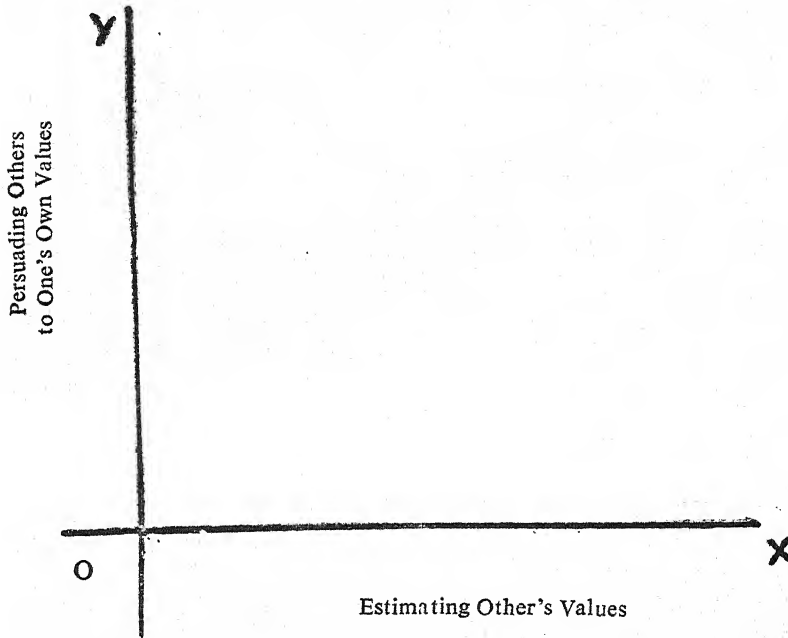
The Specialist and the Administrator

The fact-value distinction also helps to throw new light on the specialist-administrator controversy made stale by traditional arguments[8]. It shows us how the responsibility for fact and value may be so flexibly divided as to tilt the balance in favour of one or the other under different social conditions. We can see that, in general, a major decision

[7]Value, in the sense of the vaguely desirable, in a social context, remains a 'myth' in the Sorellian sense, producing purely mass psychological effects. It comes into administrative discussion only when hard facts concerning its 'cost' show its possibility or impossibility.

Apart from instances given in the text one may refer to the free education policy of Ceylon based partly on a factual report on costs (1947) as an example of possibility-demonstration. Conversely, an exercise in the Netherlands showed that accepting *all* the suggested programmes in the National Plan would require four times the existing national income.

[8]This Section is mostly taken from my paper "Specialists in British and Australian Government Services: A Study in Contrast", *Public Administration* (London), Autumn, 1963, pp, 370-72.

involves:

- (*a*) more than one value,
- (*b*) not each of which is clearly postulated,
- (*c*) several facts, it not being always clear what facts need to be assembled, and
- (*d*) nor easy to assemble those needed.

In regard to: (*a*) and (*b*) the specialist has no advantage. The decision-maker must be sufficiently alert to the values involved in the decision through sympathy, experience and training. By popular definition, the professional has little time and training to do this and can do it only at the expense of practising his own specialism. He also suffers the attendant difficulty (*c*) of not knowing what facts to assemble as this depends on the values taken into account, but in regard to (*d*) he may be particularly good at assembling facts in his field. The difficulties of the non-specialist administrator (or politician) are the reverse of these. His training and experience might have fitted him to recollect the values involved in the situation (his own and those of others) and he can, therefore, define the area of facts to be explored but he may not be fitted to explore that area as the professional is. He can produce a reasonably correct decision only if the specialist willingly supplies all the necessary material and scientific facts in a given organisational (and social) climate. Conversely, the specialist who would produce a correct decision must be aware of, and in tune with, the values involved either through his professional training (as in a medical question involving doctor-patient relations) or a general organisational training, and collect all his facts quickly through professional colleagues. It is *a priori* impossible to say whose difficulties are greater or predict who can produce the better decision. It would depend, in each case, on the number and complexity of the values involved, the degree of expertise necessary to assemble and understand the facts and the suggestive relation between the facts and values. But organisations, in general, cannot be bothered to make a decision in each case about the best procedure to make a decision and would rather vest the responsibility for all major decisions over a period in some definite persons. The identification of decision makers is based partly on the anticipations about the character of the average run of decisions to be made, partly on the bargaining position of different participants in the organisation and partly on extra-organisational factors. We will look briefly into the first of these as it is related to the fact-value distinction.

The image of the average decision differs from society to society and organisation to organisation in the same society. The government of a traditional society with a Burkean sense of continuity and responsi-

bility for the past and future can see a multitude of complex values involved in each decision. In contrast to this, the government of a young society stresses certain basic material values as obvious and settled. In the case of Britain, the traditional propensity to discover many complex values in each decision was heightened by her imperial commitments and ramifications with the distinct possibility that every decision in London could affect world events and the destinies of millions. All this put a premium on value-sensitivity, as against fact collection, and favoured the general administrator against the specialist. On the other hand, isolation and scare resources were added to a lack of tradition in Australia and settled her basic value as development by government itself. This laid emphasis on the material facts of development and on the specialist, who could discover, process and use them. General administrators helping the statesman to balance complex values were seen as pointless parasites in Australia just as they were considered the steel frame of the empire in Britain where each decision was seen to involve a multitude of complex values.

Secondly, the degree of public expression of each value plays a great part in making the image of government decision. Broadly, when nearly all the values have and are known to have vocal advocates in organised interest groups, their balancing in each decision may be done in the open almost wholly by politicians, so that their close advisers in administration tend to take on a specialist character. Where there is a low degree of vocal organisation of interests, much care is needed in taking into account all the values involved and the politician may be thankful for the help of a politically acute and anonymous administrator in spotting the multitude of values involved. Both types of body politic may retain this character for a considerable time as cause and effect reinforce each other; the guaranteed interest sensitivity of administrators keeps off many interests from organising and a high degree of interest organisation does not encourage demand for interest-conscious administrators. British central government, till recently, belonged to the former type though this is changing fast; British local government belongs to the latter type, while USA and Australia are probably foremost among societies where practically every interest is vocally organised.

There is a third way in which values lose their importance by their very eminence—through inclusion in a dominant ideology, such as communism. The assumption of its universal validity and the vesting of the right of interpretation in a small political group, leave no room for the value-sensitive administrator but give all power of executive administration to the specialist master of the facts concerned. A similar situation obtained in the absolute monarchies of Europe in the 18th century leading to the higher position of the specialist in Europe in comparison to Britain. In short, the generalist tends to dominate any

administrative situation where values are not assumed as settled and open, while the specialist comes on top in the opposite situation.

Tools of Management

Lastly, let us see how the fact-value distinction clarifies the position of tools of management in relation to organization theory. In most university teaching and in general management training, tools—such as network analysis, operations research, linear programming and computer simulation—were, in the first instance, treated as mere techniques. It is rather recently that they have at all come to be regarded as aids to decision-making.[9] But even so, they are not fitted in the proper manner into decision theory. It is recognised that they perform different functions in terms of alternatives and choice: tools like computer simulate alternatives while others, such as linear programming, help evaluate several alternatives in terms of given restrictions while still others, such as network analysis, help locate the quickest (and most efficient) way of carrying out a chosen alternative. The fact-value distinction goes further in providing a more analytical way of looking at the tools. The limits on rational decision-making may be classified on the basis of this distinction as: (*a*) the cognitive limit deriving from lack of the necessary facts, and (*b*) the emotive limit deriving from the common predicament of never knowing for sure what one really wants. All management tools may be understood in terms of reducing the cognitive limit in some way or the other. Information retrieval and survey research do it directly by amassing the necessary facts as such. At the next level, some tools 'process' the separate facts into meaningful groups, that is, alternative courses of action. Operations research and linear programming are examples of this. This 'processing' is achieved by using the already existing mathematical tools on several sequential and repetitive movements by operations research and by the mathematical expression of various restrictions to demarcate feasible alternatives, by linear programming. This processing also helps to relate facts to value for the raw facts themselves cannot seem to be logically related to any value till this place. A third type of management tool, such as network analysis, helps in carrying out a decision effectively rather than making one, by working out the most efficient combination of successive and simultaneous activities into a network.

The present favourable attitude to management tools in university courses is not concerned with making an analysis of their proper place

[9]Most books on management tools refer to them now as decision-making tools, *e.g.*, Edward C. Bursk and John F. Chapman (*eds.*), *New Decision-Making Tools for Managers*, Mentor, 1963. In the nineteen forties and fifties, however, these tools were taught as part of Industrial Engineering courses, and were known to the manager and the academic essentially as techniques.

in theory. It is, however, necessary for the academic to identify the exact component of decision-making to which they belong and the exact stage at which they should come in. We can see that they serve mainly as fact-finders or fact-processors before decision-making and less frequently as fact-processors again in regard to execution after decision-making. They, thus, establish a close relation to decision theory through its fact component. □

Towards Understanding the Concept of Bureaucratic Rationality*

Sami G. Hajjar

THIS ARTICLE attempts to philosophically analyse the concept of bureaucratic rationality by making what can be called 'utility statements' about it. It is my contention that existing theories of bureaucratic rationality in public administration literature do not adequately and properly define the concept. I shall offer an alternate concept of bureaucratic rationality which I shall call 'projected rationality'.

Essentially, two main themes permeate my discussion. The first is the thesis prevalent in most of the western literature which states that modern bureaucracies have had a negative effect on the individual. The modern bureaucratic man is an alienated man. The second theme is the trend towards a scientific study of bureaucratic behaviour which in my view, results in a narrow and restricted definition of the concept of bureaucratic rationality. Bureaucratic rationality is often confused and equated with economic and technical rationality. My alternate concept of projected rationality, the reader should be forewarned, is normative and subjective.

I

Anthony Downs, in his book *Inside Bureaucracy*, attributes to bureaucracy the characteristics of large size, full-time employees, a merit system, and the organisational outputs which are internally evaluated.[1] These characteristics permit us to arrive at a definition on bureaucratic rationality which, if not exclusive of economic and technical rationality, goes beyond these to distinguish bureaucratic decisions (the objects of the rationality test) from other forms of human decisions.

The four major characteristics of bureaucracy imply the existence of a multiplicity of goals and roles (large size, merit system), and established structures and functions (full-time employees, internal evaluation). In this

[1]*See* Anthony Downs, *Inside Bureaucracy*, Boston, Little Brown, 1967, pp. 26-28.

sense, bureaucracy is a miniature society.[2] The similarity is strengthened by the last characteristic in the definition, namely, that output is internally evaluated. D.F. Aberle, *et al*, came very close in their definition of society to the characteristic of internal evaluation when they pointed out that "the heart of the definition (of society) is 'self-sufficient system of action', and this self-sufficiency pertains only to the structure of action".[3] The same argument can be inferred from Talcott Parsons' work when he defines society as a social system "which meets all the essential fundamental prerequisites from within its resources".[4] His stress is on the independent structural and functional fundamentals of a society. It must be noted, however, that by defining bureaucracy as a miniature society, such a definition does not preclude any distintion between them. The obvious distinction is that a bureaucracy exist in a society, but not *vice versa*. Despite this fact, striking similarities remain in that multiplicity of goals and roles and established structures and functions exist in both systems, although in a smaller scale in a bureaucracy as compared to society. The most important similarity, however, is that bureaucratic action, understood as formal and collective rather than individualistic and informal, like social action, is internally evaluated.

In this part of the article, the concept of bureaucratic rationality will be discussed in the light of the definition bureaucacy just outlined. I will argue that in the literature on bureaucracy, including recent behaviouralist literature, the concept of rationality is viewed narrowly to mean only 'instrumental rationality', as Amitai Etzioni calls it.[5]

[2]This point is not difficult to assert. Large bureaucracies contain numerous units and sub-units—some of which relate directly to the functions of the organisations (line units), others only indirectly (staff units). Many other units occupy an intermediate status. In bureaucracies, furthermore, it is difficult to determine what exactly their functions are since they usually produce more than one product while, at the same time, engaging in more than one social function. For instance, large business bureaucracies today consider it part of their responsibility to actively participate in programmes dealing with urban and social ills. Further still, an employee in such large organisations plays a multiplicity of roles, for, in addition to his overall bureaucratic role, he plays a number of other minor roles at the same time as a technician, supervisor, captain of the company's soccer team, etc. All this tends to support the notion that a bureaucracy is in fact a society within a society. The literature in this area is extensive. For a brief discussion of the similarities between large organisations and society, *see* Pfiffner and Snerwood, *Administrative Organisation*, Englewood Cliffs (New Jersey), Prentice Hall, 1960, Chaps. III and XXII; and Amitai Etzioni, *Modern Organisations*, Engle-wood Cliffs (New Jersey), Prentice Hall, 1964, Chap. X.

[3]D.F. Aberle, *et al*. "The Functional Prerequisites of a Society", in Roy Macridis and Bernard Brown (eds.), *Comparative Politics*, Homewood (Illinois), Drosey Press, 1964, pp. 79-80.

[4]Talcott Parsons, *The Social System*, Glencoe (Illinois), Free Press, 1951, Chap. I, especially p. 19.

[5]*See* Amitai Etzioni, *The Active Society*, New York, Free Press, 1968, pp. 254-257.

Instrumental rationality is defined as "an open selection of means to serve a goal".[6] Etzioni suggests that an alternative notion to instrumental rationality is the concept developed by the behaviouralists which he calls 'incrementalism', a notion which is basically the same as Herbert Simon's 'Satisficing Model'.[7] While the distinction between instrumental rationality and incremental rationality is logical in the manner in which Etzioni presents it, it will be argued that instrumental rationality is the generic name for the two types of rationality, economic and technical. Technical rationality is the type stressed by the early writers in administration, such as Frederick Taylor, and Frink and Lillian Gilbreth and particularly by the scientific management school. Economic rationality is the one concept favoured by the later writers, especially Gulick, Urwick, Fayol and others, and *in essence* no profound distinction exists between it and instrumental rationality.

Instrumental rationality occurs whenever practical problems requiring solutions present themselves. The actor, being aware of the problem and the need for a solution, seeks that alternative mean that is most efficient in solving the problem. If the state of affairs is such that the actor knows *all* possible alternatives, 'most efficient' will mean that he seeks to maximise. If he is aware only of existing alternatives, then 'most efficient' will mean (to use Simon's term) that he seeks to 'satisfice'.[8] When this process of decision-making applies to one practical problem, that is when only one goal needs to be realised, then that process is designated as technical rationality. When it applies to a number of problems, or plurality of goals, it is called economic rationality.[9] The difference between both types of rationality is in what they focus upon, but both are governed by same principles of decision-making.

Let me quote Paul Diesing here :

Technical rationality appears in actions which are undertaken for the sake of achieving a given end. When such actions are repeated again and again they become standardised and turn into techniques or ways of acting. Techniques also exemplify technical rationality, since they are also oriented to goal achievement.[10]

[6]Amitai Etzioni, *op. cit.*, p. 254.

[7]*Ibid.*, pp. 268-270. Herbert Simon, *Administrative Behaviour: A Study of Decision-Making in Administrative Organisation*, New York, Free Press, 1965, p. XXIV.

[8]To Simon, bureaucrats 'satisfice' because "they have not the wits to maximise". *Ibid.*, My argument is that in reality no difference exists between satisfice and maximise.

[9]*See* Paul Diesing, *Reason in Society*, Urbana, University of Illinois Press, 1962, p. 1.

[10]*Ibid.*, p. 9.

It is clear from this description of techical rationality that it was the underlying concept in the 'scientific management school' literature. Frederick Taylor, for example, was interested in precisely those repetitive actions which a worker engages in and sought to determine the best possible techniques to be adopted in relation to every minute motion. This concept is also at the basis of Simon's 'programmed' decisions since these decisions are made in connection with standardised problems. Technical rationality, in short, applies when the question of 'how to do' arises. But beyond this practical question, what does the concept entail both theoretically and practically?

On the theoretical level, the concept of technical rationality implies at least two set of subjective values. First, it implies the values of efficiency and maximisation. "Efficiency is the maximum achievement of a given end with given resources, so it includes within itself the value of maximisation and achievement."[11] The logic of technical rationality can provide an adequate answer to the question 'why efficiency ?', but not 'why maximisation ?' If we are to ask the actor why he has chosen this alternative to a particular problem of the type 'how to do', his initial answer will be that it is to realise his goal. If we are to pressure him further by inquiring why *this* alternative, his reply will have to be, assuming he is following the dictates of technical rationality, because it achieves his goal most efficiently. "But why would you want to achieve it most efficiently?", we persist in our inquiry. At this point he will have to say, 'It maximises my goal'. Any further questioning in this direction will lead to the means-end chain whereby the actor can keep on saying that this goal that I have just maximised is a further goal I want to achieve, and to maximise this second goal I have to act in accordance with the dictates of technical rationality by maximising the first goal. The argument will eventually stop at the desire to maximise. The additional logical question "why do you desire to maximise ?" is no longer answerable by the logic of technical rationality. Our question becomes of the order 'what to do' in the normative sense, and the answer to it is a subjective value judgement.

Technical rationality implies, secondly, the value of objectivity and neutrality. The same line of questioning is applicable leading to the conclusion that either objectivity and neutrality are ends, in which case, they are value judgements, or else they are means ; in this case, they are means to maximisation which is a subjective value.

On the practical level, the application of this notion of rationality as a problem solving device would imply first that the actors in a bureaucratic situation perform highly standardised and routine tasks. Individual tasks are highly specialised and the actor chooses the most efficient means habi-

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[11]*See* Paul Diesing, *op. cit.*, p. 11.

tually. It was the perfection of this habitual behaviour under the banner of technical rationality that led to the alienation of workers from the scientific management techniques and which, subsequently, gave rise to the human relations school in the literature of public administration. The aim of the human relations school was primarily to relax the rigidity of the scientific management techniques. Secondly, the application of the notion of technical rationality implies that organisations are neatly divided and sub-divided into functional units, each having a well-defined goal with the value of maximisation underlying all these goals. In other words, each goal is a means to a higher goal, corresponding to the relation of units to one another in the hierarchy, and technical rationality presupposes that the organisation has one overall goal, that of maximisation. That goal is, furthermore, measurable by a determination of the output/input ratio in a neutral market outside the organisation. From this point alone, it is evident that technical rationality does not characterise bureaucratic rationality, for it fails to conform to the essentials of the definition of bureaucracy employed, namely, the question of internal evaluation.

Economic rationality denotes the allocation of means to alternative ends in a manner that will maximise the ends. In this sense, it incorporates technical rationality insofar as it is concerned with the choice of alternative means. It goes beyond technical rationality in that it is concerned with the choice of ends. In other words, economic rationality governs the economic process within the organisation and outside it. Within the organisation, it is applicable in two forms. First, it seeks to determine the most efficient means to the realisation of goals. In this case, it is the same as technical rationality and applies primarily to the production and distribution phases of the organisation. Secondly, it seeks to evaluate the goals realisable by technical rationality by transferring values between two economic units. This is the economic process of exchange and is made possible by viewing the goals of economic units as means to further goals. In its application outside the organisation, economic rationality seeks to "transfer values to alternative ends within an economic unit". This is the economic process of allocation and it is possible only insofar as alternative ends are measurable, usually on the scale of the outside market. In either case, economic rationality seeks to maximise in the face of limited resources.[12] It might be noted here that this concept of rationality is the one adopted by the early or 'traditional' writers in public administration (*e.g.*, Fayol, Gulick and Urwick). It was a natural adoption since these writers viewed the organisation basically from the 'top' which necessitated the evaluation of sub-goals and how they relate to the ultimate goal of the organisation. It is,

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[12]*See* Paul Diesing, *op. cit.*, Chap. II.

furthermore, basically the same notion which governs the work of behaviouralists.

The incrementalist position arises from the epistemological supposition that the decision-making process must deal with *what is*. It differs from economic rationality by viewing that type of rationality as prescribing what *ought to be* in the form of maximisation. To maximise, according to most behaviouralists, is to seek unreal alternatives and 'utopian' goals, and the decision-making process becomes an impossibility. Ironically, the concept of incremental rationality is paradoxical. To substitute satisficing for maximising means either that the rules of the scientific method, which the behaviouralists employ, are unable to attain maximisation and the behaviouralists would have to settle for a common sense position in satisficing; or that these rules are capable of determining the 'best way' but only by considering 'real alternatives', in which case satisficing is a form of maximising.

The incrementalist argument finds its natural philosophic support in logical positivism, primarily in the writings of Karl Popper. In *The Open Society and Its Enemies*, Popper argues against philosophical absolutism. He points out that its metaphysical view, that absolute reality exists independent of our knowing it, is a position conducive to totalitarian political philosophies. Instead, Popper adopts a relativistic position, advocating an empirical doctrine of reality that is knowable to the subject. In political life, such a position minimises human suffering, for instead of channelling human actions and goals in the direction of the 'ultimate good', good is realisable negatively by avoiding 'evil'. The rational actor then seeks progress and reform piecemeal, and in the language of bureaucratic theory, rational action is in 'satisficing' rather than maximising.[13]

This argument was, in part, brought into the literature of public administration by Herbert Simon and later fully developed by Charles Lindblom.[14] Lindblom argues that the "science of muddling-through" is a decisional process that follows three consecutive steps which requires the decision maker, as contrasted with his role in economic rationality to : (1) set his main objective explicitly or implicitly while at the same

[13]*See* Karl Popper, *The Open Society and Its Enemies*, Princeton University Press, 1963, pp. 156-158. The incrementalist argument is expounded further by Garl Hempell, "Rational Action", *Proceedings and Addresses of the American Philosophical Association*, Vol. XXV (October, 1962). For an analysis of absolution and relativism in philosophy and politics, *see* Hans Kelsen, "Absolutism and Relativism in Philosophy and Politics", *The American Political Science Review*, Vol. XLII (October, 1948).

[14]Charles Lindblom, "The Science of 'Muddling-through' ", *Public Administration Review*, Vol. XIX (Spring, 1959), pp. 79-88.

time admitting that he has ignored many related values and many related consequences, (2) outline whatever alternatives he has and compare them in the light of past experience; and (3) make the final selection of an alternative that "would combine into one choice among values and the choice among instruments for reaching values". As contrasted with the economic decision maker, the incrementalist aims to achieve his goal partially.[15] Lindblom calls this process 'successive limited comparison', whereby the value of a decision is determined in the course of action, which will judge whether it be accepted as it is or modified or further developed. This method is, furthermore superior to economic rationality, for it is more realistic in that it is "aware of limits on man's capacities and of the inevitability that policies" will be approached in accordance with this method.[16] As Lindblom's method is fundamentally similar to Simon's satisficing model, the following criticisms can be made :

1. The model seems to favour western culture and western bureaucracies. When it is argued that values cannot be rationally determined, but at the same time their existence is recognised, then decisions must be guided by those values which command the highest degree of acceptance.[17] This presupposes a democratic open society where decisions are the product of lengthy bargaining and peaceful adjustments. 'Muddling-through' is, therefore, inapplicable and irrational in a non-democratic western society. Its application in bureaucracy is less meaningful in western bureaucracies, especially at the lower levels of the hierarchy, for a bureaucracy by definition maintains a certain degree of authoritarianism.

2. The model of 'muddling-through' substitutes the value of maximisation with that of atomism. Each decision maker is said to partially realise his goals according to his knowledge of alternatives and their consequences, judged in the light of his own values. The decision maker, according to Simon, will then have satisfied. But in bureaucracy, whom would he have satisfied ? If he acts to satisfy himself and this logic is carried to its conclusion, then the entire notion of bureaucracy, which presupposes collective efforts, will fail. If he satisfies his superior, then of what value is the 'muddling-through model' to him? For in this case, rational action will be the maximisation of the superiors' wishes and instructions.

3. If decisions are based on those values which command the highest

[15]Charles Lindblom, *op. cit.*, pp. 79-80.
[16]*Ibid.*, p. 80.
[17]*See* Herbert Simon, *op. cit.*, Chap. III.

degree of acceptability, then the process by which conflicting values are compromised tend to favour those values held by persons in positions of power and prestige. Furthermore, if the process of compromise and bargaining takes place between majority and minority groups, then the process will tend to favour the values of the first group.

4. The model in its emphasis on past experience, tends to ignore societal innovations. As such, it favours 'conservative' decisions.

The discussion thus far leaves us with the impression that instrumental rationality is not an adequate concept for bureaucracy. *Firstly*, it implies a simplified definition of what bureaucracy is. It omits certain characteristics of bureaucracy, particularly that of internal evaluation. *Secondly*, it raises methodological problems with respect to the question of 'values', whose presence in the decision-making process is inevitable. *Finally*, it does not provide to the 'bureaucratic man' adequate alternatives to solve the problem of his alienation.

While the first two conclusions are clear from the discussion, the last may not be. Instrumental rationality offers the bureaucratic man the ability to rationally choose, and falsely equates such a choice with decision. (The distinction between choice and decision will become more apparent below). Technical rationality carries this process of choice to an extreme, where the bureaucratic man becomes a tool for the system which, if made highly technical, he would merely execute. Economic rationality, including incremental rationality, expands the area of choice by giving the bureaucratic man some leeway in how to go about acquiring the alternatives; yet these alternatives continue to be those that maximise or satisfy. This activity in itself is not a cause for his alienation, unless it is interpreted, as it must be, that the bureaucratic man neither maximises nor satisfies *his* own personal goals, but those of his employer. In this case, the alternatives he *can* choose from are 'given'. While it could be true that his goals and those of his employer may coincide (Presthus calls this type of man the upward mobile), it is also possible that they do not, as is often the case. What then is the character of alienation?

Karl Marx viewed alienation as caused by the capitalistic mode of production that forces the worker to specialise and to work for wages. As a specialist, he no longer can identify positively with the product of his labour and hence becomes alienated from it and from his own labour. He is further alienated from the system itself for it causes him to loose his freedom, namely, the freedom to exist in accordance with a mode of existence that he desires; and he becomes totally dependent on the system for his existence. To Marx, therefore, alienation results in the

loss of freedom and productive integrity. The worker lost the ability to exist in a market in which he can produce whatever product he wishes to expand his labour on, whenever he wishes, and to be paid in accordance with the amount of labour that he puts into it. In this case, the worker is free to choose whatever mode of existence he desires; while under capitalism, he is only free to subsist.

This theory of alienation does not apply to the bureaucratic man for two reasons. *Firstly*, Marx is discussing what is called today a blue-collar worker, while the bureaucratic man is usually referred to as a white-collar worker. The first type of worker physically produces, while the second facilitates production. *Secondly*, the bureaucratic man, as compared to Marx's proletariat, has not lost his freedom. In fact, he never had it. He is a special breed of man and his alienation is also special. While the blue-collar worker is alienated from the product of his labour, the bureaucratic man is alienated from the product of his *reason*. In his bureaucratic role, he ˈdoes not have the freedom to use his rational faculties freely. He has to comply to an already established decision-making process that is judged rational, for it is instrumental and value free. As such, he becomes a chooser and not a decision maker. More important, however, there is no rational way under instrumental rationality to make a decision when such a decision is required of him.

At this point, the distinction between choice and decision, which is central to the thesis of this article, can be formulated on the basis of the discussion thus far. I hold that in decision behaviour, decision makers continuously face two basic questions: 'what to do' and 'how to do'. The process by which the question 'how to do' is answered involves making of choices. I define choice as the selection of a mean or an alternative from a given set of alternatives to solve a problem of the nature of 'how to do'. The question of 'what to do', on the other hand, is less technical and always involves the selection of ends or values, a process by definition not subject to scientific and empirical determination. I define decision as the selection of ends to answer the question 'what to do'. A decision then involves subjective value judgments, a choice does not. The obvious consequence of this distinction is that existing definitions of bureaucratic rationality (*i.e.*, instrumental rationality) adequately apply to choice-making but not to decision-making. What is needed, therefore, is a concept of bureaucratic rationality that accounts for all those problems mentioned. Ideally, it ought to have answers for the problem of subjective values, the problem of alienation, and must conform to the definition of bureaucracy outlined earlier. If such a concept can be found, it will undoubtedly be utopian in nature. In the following section, I shall present an alternate concept or rationality, one which, in my judgment, is superior to instrumental rationality but inferior to

'utopian rationality'. This alternate concept will be called projected rationality.

II

Projected rationality indicates the decision-making process which allows for the expression of values and which points to the manner by which these values can be verified in bureaucracy. This concept prescribes what must be, rather than what is. It focuses on decisions as distinguished from choices. As such, the discussion will have to focus on those relations that must exist between the decision-maker, the bureaucratic setting, and the subject matter of the decision.[18]

In bureaucracy, projected rationality must apply whenever a 'difficult situation' requiring the making of a decision occurs. By difficult is meant not merely a complex situation in a technological sense, but one involving the relations mentioned above and wherein the question 'what to do' is involved. Such situations tend to occur more frequently at the upper levels of the bureaucratic structure than they do at the lower levels. This is because of the nature of the bureaucratic hierarchy that tends more towards specialisation at the lower levels. At these levels, technical rationality prevails; and consequently, more choices than decisions are made. On the other hand, the upper echelons of a bureaucracy are more involved in policy questions. This means that, in addition to their normal function of overseeing the lower levels, they perform the function of innovation (to use one of Simon's terms). In performing these functions, the actor must make decisions, for the nature of these functions is neither standardised nor routinised. Hence, the need for decisions occurs in bureaucracy in principally two ways : *First*, whenever a change or new policy is desired, either to keep up with the pace of progress or else to meet new demands; and *second*, whenever a unique situation materialises, usually at the lower levels, for which there is no precedence and no provisions for its solution are available under technical rationality. In this case, the bureaucrat is confronted with a 'difficult situation' that requires him to decide. In either case, the need for decision occurs within the bureaucratic setting; and failure to recognise the

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[18]Choices are excluded, for they are governed by technical rationality and they occur insofar as technological procedures are sufficiently standardised. It is recognised, however, that in modern complex bureaucracies, change is sometimes made necessary for a variety of reasons, and a highly routine procedure cannot be maintained indefinitely. Whenever such change or innovation is needed, then the term technical *decision* is the proper term to use, since in that instance routine choices are no longer feasible. Technical decisions will, in this case, be the same as bureaucratic decisions and must, therefore, be governed by the same notion of rationality.

possibility of a 'difficult situation' arising in a bureaucracy is one of the major faults of instrumental rationality in all its forms,[19] that is to say, when the bureaucrat has to choose between two conflicting values.

Projected rationality is a maxim prescribing that when you find yourself in a 'difficult situation' you should separate your *personal* values from it; and your decision should be the outcome of projecting the norm of your role as a bureaucrat to the referent of the situation. The alternative you choose is the one you logically determine to be instrumental in linking the norm with the referent.

Having defined bureaucracy as a miniature society, we see that the bureaucratic system is akin to the social system in that it "is a normative entity based upon beliefs, values, and norms of the membership".[20] But what is significant to note is the system of interaction which exists between individual values and beliefs and those already established in the bureaucratic structure. The interacting results, assuming that the individual becomes a career employee where he and the bureaucratic structure retain each other, in a 'fusion process'.[21] The fusion indicates equilibrium whereby both the bureaucracy and the individual gain something from each other.[22] Once this fusion occurs, the individual acquires the *role* of a bureaucrat; that is, he adds a sector to his total system of action.[23] But to acquire a role is to acquire 'role expectations' or 'patterns of evaluation'; in short, a bureaucratic norm which is given.[24]

[19]Etzioni points out that the behavioralists (incrementalists) do not deny the existence of fundamental decisions (difficult situations), but only argue that they are less common. This, of course, is no justification as to why incremental decisions do not account for 'difficult situations'. Etzioni is correct in objecting to the incrementalist argument that the actor chooses between the two kinds of decision-making (fundamental and incremental), for : (*a*) most incremental decisions specify or anticipate fundamental decisions, and (*b*) the cumulative value of incremental decisions is greatly affected by the underlying fundamental decision. *See* Amitai Etzioni, *The Active Society, op. cit.*, pp. 288-89.

[20]William C. Mitchel, *Sociological Analysis of Politics*, Englewood Cliffs, New Jersey, Prentice Hall, 1967, p. 52.

[21]*See* John Pfiffner and Frank Sherwood, *Administrative Organisation, op. cit.*, Chap. XII.

[22]The nature of the gain is immaterial to our discussion, although it can be noted that usually the individual's gain is material in the form of wages, and perhaps psychological in the form of status. The bureaucracy gains his productive power or his labour. As long as they need and strengthen each other's gain, the equilibrium persists.

[23]Talcott Parson, *Towards a General Theory of Action*, New York, Harper & Row, 1962, p. 190.

[24]For a detailed discussion of acquiring roles, *see* Ralph H. Turner, "Role-Taking : Process Versus Conformity", in Arnold Rose (ed.), *Human Behavior and Social Processes*, Boston, Houghton Mifflin, pp. 20-40.

In bureaucracy, furthermore, the norm refers to efficient, responsible, and loyal action. It positively prescribes a mode of behaviour that is required under certain circumstances.

There is nothing strange or unusual about the presence of norms in the philosophical discussion of rationality. A bureaucratic norm and a bureaucratic referent are an existential must if bureaucratic rationality is to mean anything at all. On the one hand, decisions are always made in relation to roles, if the truth (*i.e.*, correctness) of the decision is to be determined. The individual, who makes a decision, irrespective of a role (assuming that this is possible), makes such a decision without providing evidence for it. Indeed the 'difficult situation' arises because the actor is a specific *kind* of actor, in this case a bureaucrat; and the situation requires a specific *kind* of solution. This is the difficulty, and the puzzle is how to decide rationally. On the other hand, a norm can be treated in like manner as a hypothesis is treated in the body of established sciences. Like a hypothesis, therefore, a norm directs inquiry along appropriate methods; and the results of the inquiry (the final decision) will determine the truth or falsity of the norm, that is, if the actor actually projected *that* norm into the decision or if he projected some other norm.

The second important factor that enters into the discussion of bureaucratic rationality is the referent. The referent is the object of decision behaviour, and, in bureaucracy, it is the preservation of the bureaucratic structure. As the presence of a norm is crucial if the truth of a decision is to be determined, the presence of the referent complements this process. While the norm directs inquiry in such a manner that an evidence for the truth of a decision can be made, the referent is the evidence. It is, furthermore, a given standard of evaluation. We insist on this characterisation of the referent as the preservation of the bureaucratic structure, for our interest focuses on *bureaucratic* decision-making. It implies that the 'difficult situation' which confronts the actor confronts him in a bureaucratic setting and requires of him the making of a bureaucratic decision. His decision, therefore, refers to a particular subject-matter; that is, his decision has the quality of 'bureauness'. But to have a subject-matter, to be of a particular nature, is to have a referent.

The question, as to why the referent is the preservation of the bureaucratic structure, implies the need for two types of answers. *Firstly*, it implies the need for an evidence that this given referent is true. The answer in this case must be formulated from a within-bureaucratic viewpoint. In this case, the rules of common sense will tell us that it is so, for it allows for the continuation of the process by which difficult bureaucratic situation can be solved. *Secondly*, however, it implies the need to demonstrate that the preservation of the bureaucratic structure

is a 'good' value or end. In other words, it raises the general normative question, why have a bureaucracy in the first place ? In this case, we are called upon to provide an answer from outside bureaucracy, which must necessarily involve a process of evaluating values. This, however, is beyond the scope of this discussion instead we must continue to focus on a 'within' view.

The making of a true decision is now facilitated by the concrete presence of a norm and a referent. The rational solution (decision) of a 'difficult situation' can be stated thus : the actor chooses that alternative course of action which appears to him to successfully link his norm with the situation's referent. By successful link is meant a logically constructed line of action or mode of behaviour, which stretches from the worm to the referent and which resolves the 'difficult situation' while projecting that line. This is not, however, taken to mean that projected rationality is a simple matter of choice. The problem is more complicated than the statement might suggest. Indeed, the reason as to why the actor is deciding rather than choosing is because of the multiplicity of factors which surround the relationship between himself, the situation, and the referent. These factors include the determination of his proper character as a kind of decision-maker, the way he perceives the norm of his role and the probable vagueness and ambiguity of the situation, for at one moment of time he could be facing a number of related difficult situations that are difficult to separate from their referents. The merit of projected rationality lies not in providing a mechanical, clea -cut answer to every difficult situation, but only in providing guidelines on the basis of which the actor can rationally behave. As such, projected rationality includes instrumental rationality as one of its aspects insofar as the process of decision-making is concerned. It goes beyond instrumental rationality in clearly prescribing a norm and a referent. Its merit and, thus, superiority to instrumental rationality can be demonstrated by discussing the manner in which it answers the following three questions:

1. How can a decision be proven true (correct, right)?
2. How does it permit the internal evaluation of a decision; that is, how does bureaucracy evaluate its decisions without having to resort to an external market?
3. What are the consequences on the problem of alienation?

The first two questions can be answered by making a reference to Felix Kaufmann's argument regarding subjectivity.[25] His thesis is that the standards of evaluation are ultimately unjustifiable for both scientific

[25]*See* Felix Kaufmann, "The Issue of Ethical Neutrality in Political Science", *Social Research*, Vol. XVI, June, 1949, pp. 344-352.

and moral criticisms. In science, the standards of evaluation or the referent form the empirical test. A certain phenomenon is judged true or objective by virtue of its conformity to the empirical test. The question, as to why the referent in science is the empirical test, is unanswerable scientifically. It is taken as a given, since it constitutes one of the epistemological boundaries of science.[26] Therefore, in science, determination of what is true or objective is only meaningful if this question is asked *within* the epistemological and given boundaries of science. The meaning of truth, therefore, is conformity to *a referent* and not specifically to the empirical referent, since the truth of any referent cannot be asserted. This is the thrust of Kaufmann's argument which is further supported by Arthur Kalleberg's statement when he concluded that the "procedures or methods for *verifying hypotheses* are logically the same in the social as in the physical sciences."[27] Consequently, a bureaucratic decision can be asserted to be true or false to the extent to which it conforms to the bureaucratic referent. The manner by which this is to be done is, as Kalleberg concluded, logically the same as in science which can be identified as the scientific method, and which is also instrumentally rational.

The discussion points to an important fact. It now appears that it is the nature of the *referent* that determines whether a body of knowledge is scientific or not. Furthermore, a phenomenon which is not asserted scientifically need not be illogical, false or subjective. The fallacy of most of the behaviouralists is their attempt to subject all social phenomena to the empirical referent. It is the insistence on such an empirical referent that creates the alienation of the bureaucratic man. We admit, however, that some behaviouralists realise that such empirical referents are not always possible, but in this case they advocate no other concrete referent at all. Instead, they argue that the actor chooses alternatives in light of past experience first and in making such choices is guided by whatever norms are preferable to him. After such a choice has been made, then the referent will emerge. This method precluded any means to judge a decision as true and is another cause of alienation. It is, furthermore, the reason why erroneous bureaucratic decisions are often made.

CONCLUSION

Having stated that projected rationality prescribes to the bureaucrat, by means of a referent, the preservation of the bureaucratic

[26]*See* Sami G. Hajjar, "The Rationality of the Scientific Method", *The Indian Journal of Political Science*, Vol. XXXIII, April-June, 1971, pp. 145-157.

[27]Arthur L. Kalleberg, "Concept Formation in Normative and Empirical Studies", *American Political Science Review*, Vol. LXIII, March, 1969, p. 38.

structure, and by means of a norm, efficient, loyal and responsible action, and having argued that there is nothing illogical or untrue about such a prescription, we can now state the following conclusions:

1. A bureaucratic decision is true (right) insofar as it conforms to the referent of preserving the bureaucratic structure.

2. The ability to judge a bureaucratic decision as true implies that a bureaucracy can evaluate its output internally. That is, bureaucratic decisional behaviour is evaluated in terms of a bureaucratic norm and a bureaucratic referent.

3. The fact that an alternative referent to the empirical referent is given to the bureaucrat, by means of which he can evaluate the correctness (truth) of his decision, indicated a solution to alienation. For to say that his alienation is the product of his reason, is to say that he is unable to evaluate that product (decision). Furthermore, the meaning of this notion of alienation is of the same logical character as that of Marx's. The worker is unable to judge the extent to which his labour contributed to the final product, particularly when that product is the result of a complex technological process. The solution of alienation in this case is to find a method by which the worker can identify with and evaluate the product of his labour. Likewise, the alienation of the bureaucrat is soluble through project rationality which allows identification with and evaluation of decisions. Objections to the argument on the grounds that projected rationality prescribes a referent and a norm, and hence is restrictive in nature and is not functional in solving alienation, implies a misunderstanding of both the nature of alienation and its solution. Alienation refers to a disagreeable *mode of existence* rather than *existence per se*. To solve it, is to find an agreeable mode of existence, and any mode of existence implies restrictions. Hence, the worker's alienation is solvable when he is allowed to make a product from already existing primary materials. He need not create all the materials he needs to produce, for in the final analysis God becomes the only unalienated being. The same logic applies to the bureaucratic man, whereby the referent and the norm are an existential necessity.

Bureaucracy in India: An Empirical Study[*]

V. A. Pai Panandiker and S. S. Kshirsagar

THE FOCUS on 'bureaucracies' or the civil service systems has been the inevitable consequence of the policy and implementative roles which bureaucracies all over the world have played. In some of the countries of the west, including the United States, there was a prevalent myth that bureaucracies do not make policies; they merely implement them. As works of Paul Appleby and others have clearly brought out, the distinction between policy formulation and implementation is very thin; indeed policy is made where a decision is made.[1] In the socialist countries of the world led by the Soviet Russia, such distinctions are made much less. The intermeshing of the Communist party with the State bureaucracy blurs any distinctions between policy formulation and implementation.

Bureaucracies are, in other words, crucial elements of the political systems all over the world, and have been recognised to be so more or less explicitly. As Bensman and Rosenberg note, "bureacracy is not intrinsic to communism, socialism or capitalism. It can exist in any type of society, with or without private property, and in a basically dictatorial or a basically democratic climate."[2]

[1]Paul H. Appleby, *Policy in Administration*, Alabama, University of Alabama Press, 1957, p. 173.

[2]Joseph Bensman and Bernard Rosenberg, *Mass, Class and Bureaucracy*, Englewood Cliffs, New Jersey, Prentice Hall, 1963, p. 548.

OBJECTIVE OF THE STUDY

The role and significance of the public bureaucracy in India have been much more readily recognised and appreciated. The present study is an attempt to examine the characteristics of the Indian bureaucracy in the context of the prevailing bureaucratic theory. The study reviews briefly the existing theory of bureaucracy and then presents the empirical results of the application of the key postulates of this theory to the Indian bureaucracy.

Review of Bureaucratic Theory

The basic theoretical constructs of an 'ideal-type' bureaucracy as an administrative institution were formulated by Max Weber. These were subsequently modified by researchers, like Robert Merton, Peter Blau, etc. Bureaucracy has also been viewed as a political institution by other researchers emphasising its role "as an instrument of power, of exercising control over people, and over different spheres of life, and of continuous expansion of such power either in the interest of the bureaucracy itself or in the interest of some (often sinister) masters".[3]

According to Weber, "The decisive reason for the advance of bureaucratic organisation has always been its purely technical superiority over any other form of organisation."[4] The Weberian definition of the benefits of bureaucracy were mainly the following:[5]

1. Bureaucracy is efficient. It is staffed by people who have developed a method which, beyond question, is technically superior to administration by amateurs or dabblers
2. Bureaucracy is predictable. Since it proceeds from a well defined but rigid system of rules enforced through the hierarchical system, top officials have every reason to expect that orders will be dutifully carried out.
3. Bureaucracy is impersonal. That it is not influenced by any primary group sentiment, or by emotional considerations; that it subdues all personal vagaries and biases.
4. Bureaucracy is fast. Uniformity of rules makes it possible to handle a vast number of cases speedily which would otherwise be impossible.

As Weber himself expressed it, "Precision, speed, unambiguity,

[3]For a detailed review, *see* S. N. Eisenstadt, "Bureaucracy, Bureaucratisation, and Debureaucratisation", *Administrative Science Quarterly*, Vol. 4 (Dec. 1959), pp. 302-320.

[4]*See* H. H. Gerth and C. W. Mills (eds.), *From Max Weber : Essays in Sociology*, New York, Oxford University Press, 1948, p. 214.

[5]Joseph Bensman and Bernard Rosenberg, *op. cit.*, p. 267.

knowledge of files, continuity, discretion, unity, strict subordination, reduction of friction and of material and personal costs—that are raised to the optimum point in the strictly bureaucratic administration, and especially in its monocratic form".[6] To Weber, "Bureaucratisation offers above all the optimum possibility for carrying through the principle of specialising administrative functions according to purely objective considerations. The 'objective' discharge of business primarily means a discharge of business according to calculable rules and 'without regard for persons'."[7]

Weber pointed out a large number of the characteristics of his 'ideal-type' bureaucracy.[8] Mainly they were :

1. Bureaucracies are hierarchically organised. "The principles of office hierarchy and of levels of graded authority mean a firmly ordered system of super and sub-ordination in which there is a supervision of the lower offices by the higher ones."

2. Bureaucracies are based on a systematic division of labour.

3. All bureaucratic operations are governed, by a consistent system of abstract rules.

4. Bureaucratic operations consist in the application of these rules to particular cases.

5. Bureaucracies are impersonal in their character, *i.e.*, they function "without regard for persons".

6. Bureaucracies are rational in their decision-making; developed bureaucracies "succeed in eliminating from official business, love, hatred and all purely personal, irrational and emotional elements which escape calculation".

7. Bureaucracies are career-based.

8. Recruitment to bureaucracies is based on merit and technical qualifications.

Bureaucracy as a focal point for research in public administration has been the theme of considerable literature in recent years, especially in the field of comparative public administration.[9] The major problem faced in such research is whether a body of bureaucratic theory does really exist which can provide a basis for comparison. Heady, in his

[6]H.H. Gerth and C. W. Mills (eds.) , *op. cit.*, p. 214.

[7]*Ibid.*, p. 215.

[8]*Ibid.*, pp. 196-244.

[9]*See* Ferrel Heady, "Comparative Public Administration : Concerns and Priorities" and Alfred Diamant, "The Bureaucratic Model : Max Weber Rejected, Rediscovered, Reformed" in Ferrel Heady and Sybil L. Stokes, *Papers in Comparative Public Administration*, Ann Arbor (Michigan), Institute of Public Administration, 1962, pp. 1-18 and 59-96. *Also* Peter M. Blau, *The Dynamics of Bureaucracy*, Chicago, Chicago University Press, 1963, p. 322.

analysis of Berger's research[10], suggests that structural characteristics of bureaucracy seem universal enough to encourage empirical research to test hypotheses concerning behavioural patterns.

PROBLEMS FOR RESEARCH

We sought to examine the various postulates of the existing bureaucratic theory to find out the extent to which the Indian bureaucratic system conforms or does not conform to them. For purposes of the study, we decided to leave out the last two characteristics, *viz.*, that bureaucracy is career-based and that recruitment to it is made on the basis of technical qualifications and merit. We did so because there are enough studies of the Indian bureaucracy to show that it is essentially career-based as well as that its reeruitment is based on technical qualifications and on merit. We, therefore, concentrated on the first six characteristics listed earlier, which are:

Structural Characteristics
1. *Hierarchy, i.e.,* arrangement of organisational personnel into a chain of superiors and subordinates with correspoding filteration of authority and initiative.
2. *Division of labour, i.e.,* differentiation of functions based on specialisation between the officials positioned at different organiational levels.
3. *System of rules. i.e.,* prescription of elaborate rules and procedures to govern the operations of the office and the rights and duties of position incumbents.

Behavioural Characteristics
4. *Impersonality, i.e.,* discharge of official business "without regard for persons" and dealing with each just as any other 'case' to be settled according to standard norms or 'calculable' rules. It is not influenced by any primary group sentiments or emotional considerations. Thus, the tax officers would not discriminate between two assessees falling in comparable tax situation on the ground that one is an ordinary citizen and the other, say a minister or a civil servant or an industrialist.
5. *Rationality, i.e.,* choosing between alternatives objectively on considerations of efficiency: "rules, means, ends, and matter-of-factness dominate its bearing."

[10]*See* Morroe Berger, "Bureaucracy East and West", *Administrative Science Quarterly*, Vol. 1 (March 1957), pp. 518-529 and Ferrel Heady, "Bureaucratic Theory and Comparative Administration", *Administrative Science Quarterly*, Vol. 3, 1959, pp. 509-525.

6. *Rule-orientations, i.e.,* following strictly the official rules, norms of conduct, and procedures.

We have considered the first three characteristics in the above mentioned list as relating essentially to the structure of bureaucratic organisations since they set the basic foundations while the other three as basically the behavioural characteristics of bureaucracy since they involve decisional stiuations. In this study, we have assumed that bureaucracy is an organisational condition that exists along a continuum and that it is not a condition that is either present or absent.

In order to test the applicability of the bureaucratic model described above to the civil service in India, we developed the following specific major hypotheses:

1. The civil service in India is highly bureaucratic indicating that all the characteristics of bureaucrcy are present in it to an equally high degree.
2. Since bureaucratic characteristics are inherently related to one another, the civil service is uniformly bureaucratic along structural and behavioural dimensions.

METHODOLOGY

In this study, we decided to use the perceptual measures of bureaucratic characteristics. Admittedly, the perceptions of member-civil servants may be at variance with official prescriptions. There is, however, sufficient research evidence to show that the degree to which the bureaucracy perceives, accepts and adheres to the official structure is as important operationally as its formal character. We, then, developed Likert type scales for all the six characteristics of bureaucracy selected for the study. Each scale[11] consisted of a number of items inclusive of several based on actual incidents relating to the dominant theme of a characteristic described above. These scales were used as dependent variables. The questionnaire also included a series of questions about the background information of respondents, such as the class of service, level of their education, the size of their organisations, the nature of the development tasks performed by these organisations, etc. These were used as independent variables.

For illustrative purpose, we describe below a few items from the the above mentioned scales with the response categories provided for replying to them:

1. "There can be little action taken in this office until a superior officer approves a decision." How accurately does this state-

ment describe the day-to-day work of your office? (An item in the scale of *Hierarchy*.)

"Most accurate—Largely accurate—Fairly accurate—Largely inaccurate—Most inaccurate."

2. Does your position require you to do the similar things which are performed by your immediate superior? (An item in the scale of *Division of Labour*.)

"Almost all the things—Many things—Some things—Few things—Practically none."

3. In handling your official duties, do you feel that there are enough rules and regulations which give you a fairly clear direction for handling your work? (An item in the scale of *System of Rules*.)

"Rather excessive—More than enough—About enough—Ltitle—Too little."

The questionnaire was personally administered to a group of civil servants working in four developmental agencies. Three of these were more in the nature of secretariat agencies and one a field agency. The field agency handled development programmes in the area of agriculture. Two of these four agencies belonged to the central government of which one was in industrial and the other in agricultural sector. The other two agencies were similarly in the two sectors but at the state level. We did so deliberately to find out what relationship these factors had to bureaucratic characteristics. The respondents covered all the officials in Class I, II and III who dealt with development work. The total number of officials in all the three classes handling development task was 911. All were administered the questionnaire; 723 or 79.3 per cent of them replied to the questionnaire in full. The class-wise break-up of this sample of 723 civil servants was: 137 (18.94 per cent) in Class I, 136 (18.81 per cent) in Class II, and 449 (62.25 per cent in Class III. Data on one respondent was not available. In order to check the reliability of these responses, the same questionnaire was administered to a small sub-sample drawn from the above mentioned group. The results of this follow-up enquiry closely supported the findings of the main study.

MAJOR FINDINGS

To test the overall character of the bureaucratic nature of the civil service responses of the 723 officers were tabulated together on the six above mentioned scales. The respondents were rated as high and low

along each scale on the basis of the mean score of each scale. These results are presented in Table 1.

TABLE 1 SCORES ON BUREAUCRATIC CHARACTERISTICS
(N=723)

| *Bureaucratic Characteristics* | *Ratings of Respondents*[12] | |
	High (per cent)	*Low (per cent)*
Structural		
Hierarchy	59.8	40.2
Division of labour	68.6	31.4
System of rules	52.8	47.2
Behavioural		
Impersonality	73.3	26.7
Rationality	45.5	54.5
Rule-orientation	34.8	65.2

As Table 1 suggests, the generalised hypothesis that the civil service in India is 'highly bureaucratic' is not entirely borne out by the study. Although more than 50 per cent scored high on four characteristics, the scores were strikingly low on rationality and rule-orientation. The low score of the majority of the respondents on the scale of rationality supports the popular belief that decision-making in government is still not based on objective or efficiency considerations. We also ascertained the perceptions of the respondents about 'rationality' among government servants. The respondents generally felt that personal and familial relations exert considerable influence on the performance of official duties of the civil servants.

We then considered the bureaucratic characteristics along two dimensions: structural and behavioural. On the structural side, the characteristics of hierarchy and division of labour were borne out by the study. However, on the third structural characteristic, *viz.*, the system of rules, the score of the respondents was not as high as anticipated. A sizable proportion of the respondents (little over 47 per cent) reported that their jobs are not so highly codified that they are reduced to mere application of prescribed rules and procedures from case to case. Perhaps, one explanation of this could be that most of the development agencies were set up more recently and their internal system of rules had not yet reached the rigid levels as in the case of the older agencies.

[12]Respondents who scored above the mean of the scale were rated 'high' and those who scored below the mean were rated 'low'.

The findings on the structural characteristics suggest that there was sharp differentiation between the different levels and in the functions of superior officers from those of their subordinates. Thus, the process of bureaucratisation in the sense of the various characteristics of bureaucratic structure seems to have generally 'arrived' in the developmental agencies of the government at the state as well as the central levels.

The findings on the behavioural dimensions, however, suggest important variations. While the scores on 'impersonality' were quite high, on both 'rationality' and 'rule-orientation' the scores were perceptibly low. The degree of adaptation of rules suggested by the findings, indicate that the process of bureaucratisation in the developmental agencies with respect to behavioural characteristics is indicative of a different trend; that a pronounced structural feature of a well-organised system of rules is not necessarily followed by a behavioural pattern of rule-orientation.

By way of a statement, therefore, suffice it to say at this stage that the civil service engaged in developmental functions is somewhat more bureaucratic in terms of the broad structural characteristics but less bureaucratic in terms of the behavioural characteristics. The hypothesis that the developmental civil service is essentially bureaucratic is, thus, only partially valid and that important variations appear to have already emerged.

To test the second hypothesis regarding the pattern of bureaucratisation in the Indian public service, we adopted a different procedure. The questionnaire items relating to the structural characteristics of bureaucracy were taken together and considered as the scale of bureaucratic structure. Similarly, the items in the scales of behavioural characteristics of bureaucracy were considered together as constituting the scale of bureaucratic behaviour. Responses of each respondent to the items thus put together in each composite scale were added up to yield a single score on that scale. The dichotomisation of respondents into high and low categories along the above mentioned two scales was made again on the basis of the means of the composite scales. Since we sought to identify the patterns of bureaucratisation along structural and behavioural dimensions, data were tabulated, as mentioned above, separately in terms of the four offices covered in the study, their size, and also the functional content of these offices.

It is evident from Table 2 that all the four offices studied are more bureaucratic in terms of the basic structural characteristics than in terms of the behavioural ones, although there are variations between the two dimensions. However, the discrepancy between bureaucratic structure and bureaucratic behaviour is, from office to office, in the

TABLE 2 SCORES ON BUREAUCRATIC STRUCTURE AND BUREAUCRATIC BEHAVIOUR ACCORDING TO THE TYPE OF OFFICE STUDY

Dimensions	Office A (N=215)		Office B (N=109)		Office C (N=262)		Office D (N=137)		Whole Sample (N=723)	
	High (per cent)	Low (per cent)	High (per cent)	Low (per cent)	High (per cent)	Low (per cent)	High (per cent)	Low (per cent)	High (per cent)	Low (per cent)
Bureaucratic structure	72.1	27.9	82.5	17.5	76.7	23.3	59.2	40.8	72.9	27.1
Bureaucratic behaviour	69.3	30.7	61.5	38.5	64.8	35.2	49.6	50.4	62.8	37.2

same direction as that in the case of the entire sample of 723 civil servants. The general pattern, therefore, appears to be that the civil service is less bureaucratic in the behavioural aspects than in the structural aspects. The hypothesis 2 stated above is thus only partially upheld. Further analyses revealed moderate correlation between structural and behavioural dimensions of bureaucracy implying that the latter is only partly generated by the former.

Relationship to the Type of Office

While Table 2 indicates that all the four offices were more bureaucratic in terms of structural characteristics than the behavioural ones, the findings on Office D deserve special attention. Office D was a block development office with primary emphasis on agricultural development. As against the other three offices, it was essentially a field office whose performance depended a great deal on the level of citizen participation in its programme of work.

The scores on both the structural and the behavioural dimensions of office D are in considerable contrast to the three other offices. The findings, therefore, suggest that the combination of the type offices (which in this case is a field office) and the nature of its administrative objectives which involve mass contact and participation, have an important bearing on the degree of its bureaucratisation. Also, that the behavioural aspects have a bearing on the structure of bureaucracy itself. The findings suggest the propositions: (*a*) The field offices, whose performance is dependent on citizen participation and contact, will tend to be less bureaucratic and conversely, (*b*) headquarters or secretariat type offices, whose performance does not depend on mass contact or citizen participation, will tend to be more bureauratic.

Both of these propositions have major implications for the theories of bureaucracy as well as for practical and policy matters.

Relationships with Types of Functions

We also examined the relationship further in terms of the size of the organisation and the type of development functions performed by it, on the one hand, and with the degree of bureaucratisation, on the other. For this purpose, however, the performance of the respondents on each of the six characteristics of bureaucracy was considered separately. The results are presented in Table 3.

As Table 3 indicates, the functions, *viz.*, agriculture and industry handled by the offices noticeably influenced the degree of their bureaucratisation. Structurally, the agricultural agencies were more hierarchical but scored lower on the division of labour and on the system of rules. Their roles, appeared somewhat less differentiated and formalised.

On the behavioural side, agricultural agencies were much less impersonal (application of *chi*-square test showed that these differences were significant at the 1 per cent level), though they scored slightly lower on the scales of rationality and rule-orientation. The latter differences were marginal whereas, in the case of impersonality, these were found to be significant differences. Thus, the study indicates that the type of office and its functions have a major influence on the degree of its bureaucratic character.

TABLE 3   SCORES ON BUREAUCRATIC CHARACTERISTICS ACCORDING TO TYPES OF DEVELOPMENT PROGRAMMES[13]

Bureaucratic Characteristics	Chi-Square df=1	Development Programmes			
		Agriculture (N=399)		Industry (N=324)	
		High (per cent)	Low (per cent)	High (per cent)	Low (per cennt)
Hierarchy	7.58*	64.2	35.8	54.3	45.7
Division of labour	3.57†	65.5	34.5	72.2	27.8
System of rules	11.68*	47.0	53.0	59.8	40.2
Impersonality	27.89*	63.6	36.4	85.0	15.0
Rationality	1.61†	47.6	53.4	42.9	57.1
Rule-orientation	1.96†	37.1	62.9	32.1	67.9

*Significant at 0.01 level.
†Not significant.

Relationship with Size of Organisation

As regards the size of the organisation, it was found that the larger and the smaller offices studied did, to an extent, differ in their scores on the six characteristics. But this difference was statistically significant only in respect of the rule-orientation of their members, as shown in Table 4. The table is based on data from two 'large' and 'small' organisations; 477 respondents came from two large organisations and 246 from two small organisations. The percentages in the table are the proportion of members in large or small organisations reporting 'high' or 'low' rule-orientation.

[13]The classification of respondents into high and low groups was done in the same manner as in the case of Table 1.

TABLE 4   RULE ORIENTATION AND SIZE OF THE ORGANISATION

Size	Number of Respondents	Degree of Rule Orientation	
		High (per cent)	Low (per cent)
Large	477	39.0	61.0
Small	246	26.9	73.1

NOTE: *Chi*-square=10.58 and *df*=1. Significant at 0.01 level.

In general, the only proposition which emerges is: the larger the organisation, the higher the emphasis on rule orientation. On the basis of the present study, we are not able to suggest any other major influence of organisational size on the bureaucratic character of the agencies.

Relationship with Background Characteristics

We were also interested to find if the background characteristics of the civil servants were associated with their bureaucratic disposition and if so to what extent. The results are described below.

Age: On the first variable, *viz.*, age, we found that the age of the civil servants made little difference in their bureaucratic disposition, especially in the degree of their attitudes of impersonality, rationality, and rule-orientation (Table 5). Since age and length of service in the government vary together, the latter was not found to influence these attitudes to any significant degree.

TABLE 5   BUREAUCRATIC DISPOSITION AND AGE

Attitudes Considered	Degree of Bureaucratisation			
	Young (<40) (N=503)		Old(>40) (N=218)	
	High (per cent)	Low (per cent)	High (per cent)	Low (per cent)
Impersonality	72.9	27.1	73.8	26.2
Rationality	44.5	55.5	48.1	51.9
Rule-orientation	34.1	65.9	36.2	63.8

NOTE: Data on two respondents were not available.

Levels of Education: Difference in the bureaucratic attitudes of the respondents according to the levels of education attained by them is described in Table 6.

The findings, as presented in Table 6, show that higher the levels of education (beyond graduation), the higher the score on rationality and lower the score on rule-orientation. The data did not, however, show that the level of education of civil servants makes for any difference in their attitude of impersonality. We would suggest that the relationship between the educational levels and the degree of rule-orientation deserves careful consideration, especially for policy purposes. (Difference regarding rule-orientation between graduates and non-graduates significant at 0.01 level; *Chi*-square=14.84; *df*-1.)

TABLE 6 BUREAUCRATIC ATTITUDES AND LEVELS OF EDUCATION

| Attitudes Considered | Degree of Bureaucratisation | | | |
| | Graduates (N=367) | | Non-graduates (N=354) | |
	High (per cent)	Low (per cent)	High (per cent)	Low (per cent)
Impersonality	72.8	27.2	73.3	26.7
Rationality	47.6	52.4	43.5	56.5
Rule-orientation	27.2	72.8	42.1	57.9

NOTE: Data on two respondents were not available.

Rural/Urban Background: For the purposes of this study, we considered a civil servant to have either rural or urban background on the basis of his having spent a major part of his adolescent years in either rural or urban areas. The study found that the proportion of more 'impersonal' and more 'rational' civil servants was higher among the respondents having urban background than among the respondents having rural background. The study also showed that the civil servants brought up in urban environment were generally less rule-oriented. However, only the differences between the impersonality and rule-orientation of rural and urban respondents were found statistically significant. (Impersonality: *Chi-square*=4.45; *df*=1; Rule-orientation: *Chi-square*=5.66, *df*=1; both significant at 0.05 level.) These results are presented in Table 7.

Upward Mobility: As regards promotions received by the respondents, it was found that the proportion of highly impersonal civil servants was higher among those respondents who had received one or more promotions than among respondents who have not received any promotions. These results are shown in Table 8.

The data, however, also showed that the proportion of more impersonal respondents tends to be as low among the respondents who

received three or more promotions as among the respondents who have not received any promotion. It, thus, appears that promotions do not have a lasting influence on the attitude of impersonality.

TABLE 7 BUREAUCRATIC ATTITUDES AND RURAL/URBAN BACKGROUND

| Attitudes Concerned | Degree of Bureaucratisation | | | |
| | Rural (N=496) | | Urban (N=219) | |
	High (per cent)	Low (per cent)	High (per cent)	Low (per cent)
Impersonality	70.5	29.5	77.5	22.5
Rationality	43.5	56.5	49.3	50.7
Rule-orientation	37.5	62.5	28.3	71.7

NOTE: Data on eight respondents were not available.

TABLE 8 BUREAUCRATIC DISPOSITION AND UPWARD MOBILITY

| Attitudes Considered | Degree of Bureaucratisation | | | |
| | Promotees (N=463) | | Non-Promotees (N=256) | |
	High (per cent)	Low (per cent)	High (per cent)	Low (per cent)
Impersonality	77.7	22.3	67.9	32.1
Rationality	45.5	54.5	47.3	52.7
Rule-orientation	33.8	66.2	38.3	61.7

NOTE: Data on four respondents were incomplete.

The study also interestingly showed that civil servants less often tend to be highly rule-oriented as they move upwards in the hierarchy. While there were not wide differences between the proportion of the highly rule-oriented civil servants among those who have been promoted and those who have not received any promotion, it was found that among the civil servants receiving three or more promotions, only 27.5 per cent were highly rule-oriented.

In-service Training: One of the important findings of the study (Table 9) is that the civil servants who have been exposed to formal in-service training are less impersonal than those who have not received any such training. (*Chi-square*=10.82; *df*=1; significant at 0.01 level.) It

was also generally found that greater the length of formal training received by the respondents, lesser did they emphasise impersonal handling of their work. On the other hand, surprisingly enough, the proportion of highly rational respondents was found to be somewhat lower among the formally trained civil servants than among the untrained civil servants. This could be interpreted in two ways. Either that training as a factor has no important bearing on 'rationality' or that the present training system does not give adequate attention to aspects which develop the 'rational' approach in civil servants.

TABLE 9 BUREAUCRATIC DISPOSITION AND IN-SERVICE TRAINING

| Attitudes Considered | Degree of Bureaucratisation | | | |
| | Trained (N=230) | | Untrained (N=491) | |
	High (per cent)	Low (per cent)	High (per cent)	Low (per cent)
Impersonality	65.2	34.8	77.2	22.8
Rationality	42.6	57.4	47.1	52.9
Rule-orientation	34.8	65.2	34.6	65.4

NOTE: Data on two respondents were incomplete.

Parental Occupations: The study also examined the relationship between the parental occupational background of the civil servants and their bureaucratic disposition.

As shown in Table 10, it was found that the proportion of highly impersonal civil servants was larger among the respondents hailing from business families and lowest among the respondents whose parents were independent professionals, like doctors, lawyers, etc. In this respect, the civil servants coming from the families of government servants fell between the above mentioned two groups.

As regards rationality in decision-making, the results showed that civil servants who are sons of independent professionals scored higher on rationality than those coming from business families. However, the data also showed that the proportion of more rational civil servants was somewhat higher among the respondents, whose parents were government servants, than that among the respondents belonging to families of businessmen.

The study also significantly demonstrated that the civil servants, brought up in the tradition of independent professions, are least rule-oriented in the sense of over-emphasis on following prescribed rules to the detriment of larger goals. In contrast, it was found that the sons

TABLE 10 PARENTAL OCCUPATION AND BUREAUCRATIC DISPOSITION

Parental Occupation of Respondents	N	Degree of Bureaucratic Disposition					
		Impersonality		Rationality		Rule-orientation	
		High (per cent)	Low (per cent)	High (per cent)	Low (per cent)	High (per cent)	Low (per cent)
Group A							
Government service	202	67.8	32.2	44.5	55.5	32.7	67.3
Other occupations	491	74.9	25.1	46.0	54.0	35.4	64.6
Group B							
Government service	202	67.8	32.2	44.5	55.5	32.6	67.4
Agriculture	203	70.9	29.1	47.8	52.2	44.4	55.6
Business and independent profession	288	77.7	22.3	44.8	55.2	28.8	71.2
Group C							
Government service	202	67.8	32.2	44.5	55.5	32.7	67.3
Agriculture	203	70.9	29.1	47.8	52.2	44.4	55.6
Business	198	81.8	18.2	41.9	58.1	31.3	68.7
Independent profession	41	65.8	34.2	53.6	46.4	14.6	85.4
Teaching	49	71.4	28.6	48.9	51.1	30.6	69.4

NOTE: Different groups have been formed in the table to show how parental occupations make for differences in bureaucratic tendencies. Thirty respondents did not reply to the queries in full.

of agriculturists are more often characterised by such a tendency. In this respect, the civil servants with family background of government service came closer to those coming from agricultural families than to those whose parents were doctors, lawyers and other professionals.

Further analysis showed that parental occupational background of the civil servants has more influence on their orientation towards official rules and procedures than that on their attitudes of impersonality and rationality.

Class at Present : Lastly, the study, also analysed the bureaucratic disposition of the civil servants according to the class of government service to which they currently belonged. The results of this analysis are described in Table 11.

The study found that the higher class respondents (Class I and II) include a higher proportion of less, impersonal, more rational and also less rule-oriented civil servants than that among the Class III respondents. In other words, the class of service appears to have some bearing on the behavioural patterns of civil servants, though not a major influence.

The bureaucratic disposition of the civil servants of this study was examined above in relation to their background characteristics. Overvall, the study found that differences in bureaucratic disposition on account of differences in background characteristics were generally statistically not significant. Nonetheless, the study did reveal certain broad associations between levels of education, rural/urban background, upward mobility and in-service training of the civil servants and the rigidity of their bureaucratic attitudes.

CONCLUDING OBSERVATIONS

A basic conclusion emerging out of the study is that the general constructs of bureaucratic theory as evolved by Weber and others provide useful basis both for practical as well as for broader theoretical and comparative purposes. To the extent that the study identifies the universality of the structural characteristics of bureaucracy, it also supports Heady's thesis that for comparative purposes bureaucratic structure presents a meaningful starting point.

The study, however, reveals that the structural and behavioural characteristics are only moderately related; that the functional content of the bureaucracy, the type of office and its level of mass contact to meet programmatic needs, and the level of its skill composition have a significant bearing on the behavioural characteristics. This finding has rather important theoretical as well as practical implications.

Theoretically, it implies that bureaucracy is not a static phenomenon with certain standard structural and behavioural characteristics

TABLE 11 BUREAUCRATIC ATTITUDES AND CLASS AT PRESENT

Bureaucratic Attitudes Considered	*Degree of Bureaucratisation*					
	Class I (N = 137)		*Class II* (N = 136)		*Class III* (N = 449)	
	High (per cent)	*Low* (per cent)	*High* (per cent)	*Low* (per cent)	*High* (per cent)	*Low* (per cent)
Impersonality	70.1	29.9	69.9	30.1	75.3	24.7
Rationality	48.9	51.1	51.5	48.5	42.8	57.2
Rule-orientation	29.2	70.8	33.8	66.2	36.7	63.3

NOTE : One respondent did not indicate his class of service.

in more or less comparable proportions. Bureaucracy is a far more dynamic phenomenon in which its functional content, mass contact inherent in its objectives and several other factors influence its behavioural characteristics. What is more, the behavioural characteristics appear in turn to modify or alter the bureaucratic structure itself as was exemplified by the score of the Office D in the study.

In other words, the existing theory of bureaucracy based essentially on the Weberian model which, though extremely useful as a starting point, appears to be somewhat static. Even Heady's thesis[14] of using the structural postulates of Weberian theory appears to be restrictive. While Heady's approach may make comparative studies in bureaucracy relatively easy, it would not help adequately in the development of a more rigorously based bureaucratic theory either for academic or policy purposes. The main limitation of Heady's approach is that it makes structural postulates of bureaucratic theory independent of the behavioural postulates. The present study suggests that structural postulates are not after all so independent as to build bureaucratic theory around them; that it is necessary to examine structural and behavioural postulates together to formulate a more valid and useful bureaucratic theory, even though this creates many research problems.

The findings of the present study also suggest that what we need is not only a generalised bureaucratic model but also a range of sub-models in which its various characteristics play differing roles, some more powerful, some less powerful, in various combinations. The main considerations which appear to necessitate such a range are: (*a*) the functional content of bureaucracy differs from agency to agency; (*b*) the degree of mass contact it involves, especially to achieve its objectives, vary; and (*c*) the skill composition, including the levels of education of the bureaucracy, itself undergoes major alterations between agencies within the same governmental apparatus.

The present study suggests propositions like: (*a*) bureaucracies involved in developmental tasks at the field level, such as in agriculture, necessitating mass contact and participation and with more skilled personnel, tend to be less structured and behaviourally more flexible than secretariat-based more remote bureaucracies. Implied is the proposition that (*b*) bureaucracies essentially in the regulatory and other non-developmental agencies will tend to be structurally more rigid and behaviourally less flexible. In between these would be a whole range of intermediate positions.

While the present findings could be termed at best proposing new hypotheses, it is important to bear in mind that at no time has the bureaucracy in India attempted to deliberately adapt its behavioural

[14]Ferrel Heady, "Bureaucratic Theory and Comparative Administration", *op. cit.*

patterns to suit the organisational objectives. The changes which are noticeable in the Indian setting have clearly grown out of the natural processes and the administrative compulsions rather than by design. The findings, therefore, are important both for the theoretical as well as for practical purposes.

Does the study suggest any specific modifications in the general bureaucratic model? The answer seems to be: partly yes. In the developmental bureaucracy, at least two modifications seem to emerge. One is more of a traditional equilibrium bureaucracy in which the structural and behavioural postulates are relatively balanced. Such a bureaucracy would be 'secretariat' tpye with relatively little 'mass contact' for achievement of its objectives. The other would be a 'dynamic' condition where both the structural and the behavioural characteristics are changing as a result, *inter alia*, of the interaction between the bureaucracy and the citizen clientele inherent in the achievement of administrative objectives.

The study, thus, supports, to an extent some of the findings of Peter Blau. However, Blau was more concerned with the assessment of 'functional' and 'dysfunctional' adaptation of the bureaucracy to changing organisational objectives.[15] The present study did not specifically seek to analyse the 'functional' adaptation or otherwise of the Indian bureaucracy. While some degree of change in the direction of functional adaptation is visible, the more important conclusions of the study relate to the basic theoretical framework of bureaucracy itself and performance of the Indian bureaucracy in terms of this framework.

To sum up, the findings of the study suggest that the existing bureaucratic theory is somewhat static and that it does not take into account forces which tend to change significantly both the structural and behavioural postulates. For applied as well as academic purposes, therefore, we need to build into the theory, factors, such as its functional content, the degree of citizen participation in its operations, etc., which give it a more dynamic character. From a practical point of view, the findings of the study suggest a wide variety of levers which can help utilising bureaucracy as a more effective instrument of achieving administrative objectives. □

[15]Peter M. Blau, *op. cit*.

A Dimensional Approach to the Ecology of Public Bureaucracies— An Addendum to John Forward*

Ramesh K. Arora and Augusto Ferreros

'ECOLOGY' IS an 'in' word in policy sciences. However, its main application has been in the field of biology, where it suggests the interdependence between an animal species and its natural environment. Sociologists have extended the use of the term to mean a study of man's spatial relations in urban settings. In 1947, John M. Gaus in a seminal paper, emphasised the need to employ the concept of ecology in the study of public administration—namely, the necessary interdependence of public bureaucracy and its environment.[1] He presented a list of factors 'useful as explaining' the ebb and flow of the functions of government. They were: people, place, physical technology, social technology, wishes and ideas, catastrophe, and personality.[2] Besides leaving the problem of overlapping categories unresolved, Gaus did not elaborate these factors sufficiently, though his suggestive study did encourage other scholars to look at ecological dimensions of public administration.[3] In the same year, Robert Dahl criticised the culture-bound character of public administration literature and stressed the need for cross-cultural studies that emphasised environmental effects on administrative structure and behaviour.[4] Dahl observed that public

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*From *The Indian Journal of Public Administration*, Vol. XVIII, No. 2, 1972, pp. 200-215.

[1]John M. Gaus, "The Ecology of Government", in *Reflections on Public Administration*, University of Alabama Press, 1947, pp. 1-19.

[2]*Ibid.*, p. 9.

[3]The relation of public administration to its peculiar environment was not altogether ignored in the previous literature. For studies not ignoring environmental variables, see among others, Walter Dorn, "The Prussian Bureaucracy in the Eighteenth Century", *Political Science Quarterly,* Vol. 46, 1931, pp. 403-23; Fritz Morstein Marx, "Civil Service in Germany", in *Civil Service Abroad*, New York, McGraw-Hill, 1935; and John M. Gaus, "American Society and Public Administration", in L. D. White, John M. Gaus, and M. E. Dimock, *The Frontiers in Public Administration*, Chicago, University of Chicago Press, 1936.

[4]Robert A. Dahl, "The Science of Public Administration: Three Problems", *Public Administration Review*, Vol. 7, 1947, pp. 1-11.

administration cannot escape the effects of 'national psychology' and political, social, and cultural environment in which it develops. He decried the almost total ignorance of the relationship between the so-called "principles of public administration" and their general setting.

In fact, Dahl was simply reflecting an emerging interest in the United States in the study of administrative patterns of the newly independent nations during the post World War II period. The varied patterns of existing administrative systems encountered in the emerging nations stirred interest in the diverse effects of social setting upon public administration. Reflecting upon this period of growth in the discipline, Edgar Shoor was correct in observingthat no enlightened discussion of non-western administration or its modernisation would neglect to acknowledge, if only perfunctorily, the relevance of environmental factors.[5] During the same period, the US technical assistance programme was in its early period of growth. Considering this early development, Roscoe Martin pointed out that the vital issues were not whether, but which of these factors were significant, and what elements of western practice were transferable.[6]

This perspective had an implicit impact in the writings of public administration scholars during the 1950's. By 1961, Fred W. Riggs, in his ground-breaking *The Ecology of Public Administration*, had explored, from a comparative perspective, the interaction between public administration and the environment in which it develops.[7] Riggs developed his analysis in the study of public administration in the US, ancient Siam and modern Philippines and Thailand, representing broadly his ideal type models of 'refracted', 'fused', and 'prismatic' societies respectively. He chose only social, economic, symbolic, communication, and political variables of the environment for specific treatment, and left psychological and cognitive factors outside his purview of study. Later, he examined broadly the dimensions of geographic ecology, time, demography, national psychology, and 'social technologies' of the complex process of 'development' in cross-cultural settings.[8]

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[5]Edgar L. Shor, "Comparative Administration : Static Study Versus Dynamic Reform", *Public Administration Review*, Vol. 22, 1962 reprinted in Claude E. Hawley and Ruth G. Weintraub (eds.), *Administrative Questions and Political Answers*, New York, D. Van Nostrand, 1966, p. 511.

[6]Roscoe C. Martin, "Technical Assistance : The Problem of Implementation", *Public Administration Review*, Vol. 12, 1952, p. 266.

[7]Fred W. Riggs, *The Ecology of Public Administration*, New York, Asia Publishing House, 1961.

[8]Fred W. Riggs, *The Ecology of Development*, Bloomington (Indiana), Comparative Administration Group 1964. It might be noted that besides the students of public administration, social organisation theorists have also used the concept of environment of organisations. It has been elaborated specifically in the literature employing

Though the conceptual perspectives of Riggs have been insightful, his analysis has not been precise enough to permit operationalisation of some of his categories in the study of the administrative ecology.

The basic premise of the ecological approach in comparative public administration is that public bureaucracy may be regarded as one of the several basic institutions in a society. Thus, in order to understand its structure and functions, it must be studied in the context of inter-relationships with other institutions. In systemic terms, bureaucracy as a social institution is continually interacting with—*i.e.*, affected by and feeding back upon—the economic, political and socio-cultural sub-systems in a society. It is both a modifying influence on these systems as well as a system which is modified by their activity. It has been recognised then that the knowledge of the ecological dimensions of public administration in various settings can aid the 'scientific' development of the study of public administration. Its practical importance lies in the insights it provides in the policy-formulation process in the areas of technical assistance and administrative development.[9]

One common weakness of most of the frameworks on administrative ecology is that they are based solely upon intuitive and *a priori* assumptions concerning the relationship of public bureaucracies and other societal sub-systems.[10] Thus, while these frameworks may make important contributions in terms of descriptive analysis and imaginative classificatory schemes, their contribution to explanatory theory is hampered by the absence of systematic methodology as well as an empirical base upon which to generate hypotheses.

NATURE OF PRESENT STUDY

This study attempts to provide an empirical framework for ecological studies in comparative public bureaucracies. In doing so, it builds upon the work of John Forward.[11] The attempt here will be

(*Continued from previous page*)

the 'open' systems approach. *See*, for example, Philip Selznick, *T.V.A. and the Grass Roots*, Berkeley, University of California Press, 1949 ; Talcott Parsons, "Suggestions for a Sociological Approach to the Theory of Organizations", *Administrative Science Quarterly*, Vol. 1, 1956, Nos. 1 and 2, pp. 63-85 and 224-39; and James D. Thompson, *Organisations in Action, Social Basis of Administrative Theory*, New York, McGraw-Hill, 1967.

[9]For these emphases, *see* Roscoe C. Martin, *op. cit.*, and Robert A. Dahl, *op. cit.*

[10]*See*, for example, Joseph LaPalombara (ed.), *Bureaucracy and Political Development*, Princeton, Princeton University Press, 1967.

[11]John Forward, "Toward an Empirical Framework for the Ecological Studies in Comparative Public Administration", in Nimrod Raphaeli (ed.), *Readings in Comparative Public Administration*, Boston, Allyn and Bacon, 1967, pp. 450-472.

to design a broad and general framework for comparative empirical studies in the field of public bureaucracies.

Most of the studies of ecology of public administration are of an 'ideographic' character, *i e.*, they have a single society or area orientation. The present study adopts a 'nomothetic' approach which is a general theory building strategy.[12] However, both of these orientations should be considered as complementary and not competing.

HYPOTHESES AND DATA

Probably the only existent attempt to relate ecology to bureaucracy in precise quantitative terms systematically has been that of John Forward. Initially, Forward examined the interrelationships of 25 ordinally and nominally scaled variables with a nominal scale purporting to measure the 'nature' of bureaucracy. These variables for 115 nations were obtained from the banks and Textor study, *A Cross Polity Survey.*[13] Forward picked out the sub-set of independent variables that were most highly associated (*via* contingency coefficient analysis with the index of the 'nature' of bureaucracy. These 25 variables were: (1) historical and significant westernisation, (2) urbanisation, (3) interest articulation by associational groups, (4) literacy rate, (5) economic development status, (6) ratio of agricultural population to total population, (7) level of political modernisation, (8) charismatic leadership, (9) per capita national product, (10) ideological orientation, (11) newspaper circulation, (12) toleration of autonomous groups in politics, (13) competitiveness of electoral systems, (14) representative character of regimes, (15) effectiveness of legislature, (16) government stability since World War II, (17) frequency of interest articulation groups, (18) linguistic homogeneity, (19) gross national product, (20) stability of the party system, (21) density of population, (22) level of sectionalism, (23) level of political enculturation, (24) religious homogeneity, and (25) system style.

The ordinal measure of bureaucracy used in Forward's study was identical to Banks and Textor's index of the character of bureaucracy. Although the measure is subject to an unknown degree of error in that it is based on the subjective ratings of experts in the field, and despite its ambiguous definitions, it is the only measure available.

[12]For distinction between ideographic and nomothetic approaches, *see* Fred W. Riggs, "Trends in the Comparative Study of Public Administration", *International Review of Administrative Sciences*, Vol. 28, 1962, pp. 9-15. Riggs has underlined the importance of the nomothetic approach for general theory building in public administration. *See* Fred W. Riggs, *Administration in Developing Countries : The Theory of Prismatic Society*, Boston, Houghton Mifflin, 1964, p. 427.

[13]Arthur S. Banks and Robert B. Textor, *A Cross Polity Survey*, Cambridge (Mass.), M.I.T. Press, 1963.

Each polity in their sample has been classified into one of the following categories:

Modern—generally effective and responsible civil service, performing in a functionally specific, non-ascriptive social context;

Semi-modern—largely rationalised bureaucratic structure of limited efficiency because of shortage of skilled personnel, inadequate recruitment criteria, excessive intrusion of non-administrative organs, or partially non-congruent social institutions;

Transitional—largely rationalised ex-colonial bureaucratic structure in the process of personnel nationalisation and adaptation to the servicing or restructuring of autochthonous social institutions; and

Traditional—largely non-rationalised bureaucratic structure performing in the context of ascriptive or deferential stratification systems.

Forward took a sub-set of 12 measures from the 25 variables and performed an unfolding scaling analysis to construct *a priori* dimensions of ecology, calling this a factor analysis procedure. He focused on 12 particular variables because of the computational constraints involved in unfolding a 25×25 matrix of correlations. Forward then observed that he had derived four distinct factors and a fifth residual one. The four factors were : economic, communications, political, and socio-cultural.

Several problems became apparent in Forward's analysis. First, he used unfolding analysis to 'factor' his ecological dimensions—a procedure quite distinct from orthodox factor analysis techniques as we know it. Also possible was a factor analysis procedure, such as the principal axes technique, or the centroid method to extract the ecological dimensions—but Forward chose not to do so. In using unfolding analysis, he used a technique more appropriate for 'unfolding' ordinal preferential choice data into sets of scales.[14] His ordinal scales were based on the orderings produced by the rank order of the sizes of the contingency coefficients of the variables in relation to *a priori* defined core variables of each factor. This leads us to Forward's main problem that he had already imposed the existence of his dimensions prior to his analysis. Factor analysis, as opposed to unfolding analysis, does not presume *a priori* notions of the latent structure of the data. Instead, it attempts to uncover latent dimensions or meaningful linear combinations that may be existent in the data.[15] In doing so, it approximates

[14]*See* C. H. Coombs, *A Theory of Data*, New York, Wiley, 1964, pp. 85-106.
[15]For the functions of the factor analysis, *see* Rudolph J. Rummell, "Understanding Factor Analysis", *Journal of Conflict Resolution*, Vol. 11, 1967, pp. 444-481.

the 'true' structure underlying the data in a more meaningful way than *a priori* determination of such a structure from the construction of the dimensions by ordinal scaling procedures. From this perspective, Forward's 'derived factors' are of limited utility in portraying dimensions of administrative ecology.

The hypotheses of this study are based on the assumption that the ecology of public bureaucracies is multi-dimensional. Forward's findings can also be advanced as suggestive of the ecological structure of such bureaucracies.

Riggs has called our attention to the importance of the economic factor and 'marketisation' influences on systems of administration.[16] He has noted the effect of market principles on the personnel and fiscal systems of developing countries. The efficacy of economic facets of the administrative ecology is also underlined by Forward's findings. His first 'factor' was labelled an 'economic' factor. It can, thus, be hypothesised that an economic development factor underlies the variance in the correlation matrix of these 25 variables, and that variables, such as GNP, per capita national product, economic development status, agricultural-total population ratio, and urbanisation should have high loading on this factor.

The role of communication has long been emphasised in the literature on social organisations and public administration. John Dorsey and Fred Riggs have emphasised communication as an important component of administrative ecology. Dorsey, in fact, has sketched an information energy model for administrative systems in developing societies and has observed that low levels of development vary along with low supplies and surpluses of information and energy. Dorsey recommends that societies seeking development increase their informational intake and their information handling capacity in developing networks of transportation and communication.[17] Riggs emphasizes more specifically the importance of literacy, common language, radio, press, and T.V. services (the media), and religion in inducing mobilisation and assimilation of population and their impact on public administration.[18] In keeping with these ideas and Forward's findings, it can be hypothesised that a communication factor is latently suggested by the 25 variables under examination. Variables that are expected to load highly on this dimension include: literacy, newspaper circulation, linguistic homogeneity, level of sectionalism and religious homogeneity.

[16]*See* Fred W. Riggs, "Administration in Developing Countries : The Theory of Prismatic Society", *op. cit.*, pp. 100-121.

[17]John Dorsey, "An Information Energy Model", in Ferrel Heady and Sybil Stokes (eds.), *Papers in Comparative Administration*, Ann Arbor (Michigan), Institute of Public Administration, 1962, p. 52.

[18]For Riggs' treatment of these variables in the context of the U.S. administrative ecology *see* his, "The Ecology of Public Administration", *op. cit.*, pp. 34-36.

Socio-cultural factors are likewise extremely important in the manner in which these shape administrative ecology. Riggs has noted the possible effects of such social structures as families, sects, social classes, and associational groups on administration.[19] These structures crucially affect bureaucratic recruitment, socialisation, promotion and mobility. Furthermore, the role of culture and symbols in administration is also important in shaping administrative values, such as consensus and equality.[20] William Storm has also emphasised the significance of the study of the cultural factors of administrative ecology in comparative administration.[21] Michael Crozier's study has shown how the French bureaucratic behaviour is influenced considerably by the societal cultural norms in France.[22] It can, thus, be hypothesised, that a socio-cultural factor underlies the data analysed in this article, and it is suggested that both social and cultural variables tend to interact with, and relate to, each other in a fashion that renders any distinction between these difficult, particularly in the context of developing areas. Variables that are expected to load on this factor are : Westernisation, frequency of associational groups, population density, sectionalism, religious homogeneity, and linguistic homogeneity.

The political framework of administrative systems has long been emphasised in the literature of western democratic, European communist, and the emerging nations of Afro-Asia and Latin America.[23] The fallacy of the politics-administration dichotomy was shown by a number of scholars such as Paul H. Appelby, Harold Stein, and Morstein Marx, during the post World War II period. The emphasis on the role of political factors in administrative decision making is being restated anew by such writers as Peter Woll, Aaron, Wildawski, and George Gawthrop.[24] Brzezinski and Huntington have shown how the

[19] *See* Fred W. Riggs, "Administration in Developing Countries : The Theory of Prismatic Society", *op. cit.*, pp. 157-173.

[20] *Ibid.*, pp. 174-205.

[21] William Storm, "Anthropology and Comparative Administration", in C. Hawley and R. Weintraub (eds.), *op. cit.*, pp. 496-499.

[22] Michael Crozier, *The Bureaucratic Phenomenon*, Chicago, University of Chicago Press, 1964. *See also*, Lucian W. Pye, *Politics Personality, and Nation Building : Burma's Search for Identity*, New Havan, Yale University Press, 1963.

[23] Ferrell Heady has accorded considerable significance to the political environment of public bureaucracies. His typology of bureaucratic system is based on the political systems in which they operate. *See* Ferrell Heady, *Public Administration : A Comparative Perspective*, Englewood Cliffs (N.J.), Prentice Hall, 1966, especially chapters 5 and 6.

[24] Peter Woll, *American Bureaucracy*, New York, W. W. Norton, 1963; Aaron Wildawski, *The Politics of the Budgetary Process*, Boston, Little Brown, 1964 ; and George Gawthrop, *Bureaucratic Behavior in the Executive Branch*, New York, The Free Press, 1966.

administrative and political structures are intertwined in the Soviet Union.[25]

The political elements in administration become quite significant in the power structure of administrative systems in developing areas. Weiss observes that, in developing states, a governmental bureaucracy is a sub-system of society in general and political institutions in particular.[26] It can then be hypothesised that a political factor is expected to be derived from the existent data and that variables loading highly on this factor consist of : interest articulation by associational groups, level of political modernisation, leadership charisma, ideological orientation, group toleration, electoral competitiveness, regime character, legislative effectiveness, government stability, party system stability, level of political enculturation and system style.

Following the initial assumption of multi-dimensionality, certain hypotheses regarding the structure of ecological components underlying the data have been put forward. These propositions imply that administrative ecology consists of four basic dimensions, namely, the economic, communication, socio-cultural, and political. These components are not necessarily uncorrelated, nor do the variables hypothesised as loading highly and positively on these components, necessarily load exclusively on these. The use of factor analysis in this context is primarily that of a tool for testing hypotheses on the dimensionality of the particular domain as defined by the 25 variables. Strictly speaking, the analysis does not focus primarily on the investigation of association between variables but rather on the kinds of clusters these variables form in the space of the data. Forward's contribution that these 25 variables and its sub-set of 12 correlate highly with the nature of bureaucracy, is acceptable, although the examination here includes all the 25 variables (unlike Forward) and uses principal component factor analysis.

Method

The tools used in this study consist of Pearson product moment correlation analysis and principal components factor analysis, followed by an orthogonal rotation using Kaiser's normal Varimax. Nominal and ordinal scaled variables have often been subjected to interval techniques of analysis. Examples of these are the research works of Rudolph Rummel, Gregg and Banks, Nye, Powell, and Prewitt, and Michael

[25]Z. Brzezinski and Samuel P. Huntington, "Cincinnatus and the Apparatchik", *World Politics*, Vol. 16, 1963, pp. 52-78.

[26]M. Weiss, "The Role of Governmental Bureaucracies in Developing States", *Public Administration* (Jerusalem), 1967, pp. 112-120.

Haas.[27] The issues surrounding the use of such scales arise from the properties of such scales and the permissible operations that are defined on these. Tufte and Willer have both emphasised that ordinal scales have interval properties and, thus, may be dealt with using interval methods without distorting the relationships inherent in the data.[28] Nye *et. al.*, have shown that a matrix of Pearsonian γ's does not differ significantly from that of a matrix of Rho's or Spearman rank coefficients. More sophisticated data analysts, such as Abelson and Tukey, have long been employing interval techniques to categorical and ordinal data.[29] Tufte observes that several statisticians have taken the distinction between ordinal and interval measurement "very, very seriously—almost to the point of paralysis". He warns, "By sticking rigidly to the distinction between ordinal and interval levels of measurement (a distinction often difficult to make in practice), we are, in effect, censoring the data and shutting off part of what the data could tell us—if we would only let them."[30] In the face of potential gains in measurement and analysis, Tufte sees very little of the potential cost in such scale-transformations.

Principal component factor analysis is distinctly superior to unfolding, for reasons explained above in the terms of drawing factors or linear combination of variables from a correlation matrix. It presupposes that a mainfest variable X_{jl} may be described as a combination of latent factors or components, the basic model being:

$$X_{jl} = \Sigma A_{jk} C_{kl} (j = 1 \ldots m; 1 = 1 \ldots n)$$
$$k = 1$$

[27]Rudolph J. Rummel, *Applied Factor Analysis*, Evanston, Northwestern University Press, 1970; Arthur S. Banks and Phillip M. Gregg, "Grouping Political Systems : Q-factor Analysis of a Cross Polity Survey", *The American Behavioral Scientists*, reprinted in John V. Gillespie and Betty A. Nesvold (eds.), *Macro-Quantitative Analysis*, Beverly Hills (California), Sage Publications, 1971, pp. 311-320; Phillip M. Gregg and Arthur S. Banks, "Dimensions of Political Systems, Factor Analysis of a Cross Polity Survey", *APSR*, Vol. 59 (1965), pp. 555-578; Norman Nye, G. Bingham Powell, and Kenneth Prewitt, "Social Structure and Participation: Developmental Relationships", *APSR*, Vol. 62, 1969, pp. 361-379, and Vol. 63, 1969, pp. 808-832; and Michael Haas, "International Subsystems : Stability and Polarity", *APSR*, Vol. 64, 1970, pp. 98-123.

[28]Edward R. Tufte, "Improving Data Analysis in Political Science", *World Politics*, Vol. 21, 1969, pp. 641-654; and David Willer, "A Test of Interval Equivalence", *Kansas Journal of Sociology*, Vol. 3, 1967, pp. 95-98.

[29]R. Abelson and V. Tukey, "Efficient Conversion of Non-Metric Information into Metric Information", in Edward R. Tufte (ed.), *The Quantitative Analysis of Social Problems*, Reading (Mass.), Addison Wesley, 1970.

[30]Edward R. Tufte, "Improving Data Analysis in Political Science", *op. cit.*, p. 645.

where
$$x = \text{individual value,}$$
$$c = \text{component, and}$$
$$a = \text{loading}$$

The principal estimation problem in the component- factor analysis is deriving the *l*'s and *a*'s, under the restriction that the factor is uncorrelated. These factors may then very parsimoniously explain manifest correlations. The primary step in estimating these latent factors is the calculation of eigenvalues and eigenvectors of the correlation matrix with *l*'s on the diagonal. From Cooley and Lahnes, the matrix equation of component factor analysis is :

$$Rak = \lambda k \; Ak^{31}$$

Resulting eigenvectors *Ak* (with corresponding values *λk*) can, after adjusting, be considered as columns of factor loadings—which, if the factors are uncorrelated, describe the correlation of variables with the factors.[32] The unrotated matrix is then examined to see the major patterns of variation in the data and the factors are rotated to clearly depict interpretable dimension—or a 'single-structure' of high positive, zero and/or high negative loading coefficients. Kaiser's normal Varimax was employed as the criterion for rotating the matrix since it maximises the variance of the factor columns.[33] Interpretations were based on this last matrix.

Results

The 25 variables were intercorrelated using Pearson product moment correlation analysis.[34] The correlation matrix with *l*'s in the main diagonal was factored using principal component analysis.[35] Since the major concern lies in the rotated factor solution, intercorrelations and unrotated matrices were treated only preliminary steps to the rotated loading matrix which presents the basic findings of this article. The initial principal components solution derived six factors from the correlations. Altogether the six factors explain a very respectable 72 per cent of the total variance in the data. Only those factors that explained more

[31]William Cooley and Paul Lahnes, *Multivariate Procedures for the Behavioral Sciences*, New York, Wiley, 1962, p. 158.

[32]*See* Rudolph J. Rummell, *op. cit.*, especially Chapter 14, "Factor Techniques", pp. 323-348.

[33]*Ibid.*, pp. 391-393.

[34]The computer programme used was SFAO1B, "Correlations, Standard Scores and Plots", Kansas University Computation Center.

[35]The computer programme used was SFAO3C, "Principal Component Analysis", Kansas University Computation Center.

than 5 per cent of the variance were kept for rotation purposes. In this case, the same six factors met this criterion and were rotated orthogonally using Kaiser's Normal Varimax.[36] The resulting matrix is displayed in Table 1 at pages 80-81.

Instead of the four hypothesised factors, six were derived from the correlation matrix. On the basis of the variables that loaded highly on each factor, labels were assigned to each of the six factors, which were: a modernisation factor, a democratisation factor, a political stability factor, a cultural integration factor, an ethnic diversity factor and an ideological-systemic factor.

Factor one—modernisation—explains the largest amount of the variance in the rotated solution (41.4 per cent), and contrary to initial expectations, social, communication and economic type variables as well as some political variables loaded highly on this factor. Apparently, social factors go hand in hand with communication and economic factors in the process of development—a well established thesis in current theory in development economics.[37] The variables with loadings higher than ± 0.50 are given as follows :

Variables

Urbanisation	0.53
Agriculture/total population ratio	—0.84
Gross national product	0.75
Per capita national product	0.91
Economic development status	0.84
Literacy	0.67
Newspaper circulation	0.81
Westernisation	0.86
Political modernisation scale	0.75
Interest articulation by associational groups	0.78
Interest articulation by institutional groups	—0.63
Leadership charisma	—0.51

Modernisation seems to be an appropriate label given the high positive loadings of the economic measures of GNP and economic development. High GNP rates and high degree of economic development

[36]The computer programmes was SFA13A, "Varimax Factor Rotation", Kansas University Computation Center.

[37]*See,* among others, Gerald Meier, *Leading Issues in Economic Development*, New York, Oxford University Press, 1970 (2nd edition) and Robert Heilbroner, *The Great Ascent*, New York, Harper, 1965, and *The Economic Problem*, Englewood Cliffs, (N.J.), Prentice Hall, 1970 (2nd ed).

TABLE 1 ROTATED FACTOR LOADING MATRIX (25 ECOLOGICAL VARIABLES) KAISER'S NORMAL VAIRMAX ORTHOGONAL ROTATION

	Factor Loadings		Col—Factor		Row—Variable		Index of Variable Description
	1	2	3	4	5	6	
1	0.4358	0.1103	—0.0615	—0.0266	—0.2115	0.4963	1 Density of Population
2	0.5357	0.0244	0.1315	0.4628	—0.2183	0.1021	2 Urbanization
3	—0.8418	—0.2389	0.0416	0.1051	0.0948	0.1102	3 Agriculture/total Population Ratio
4	0.7536	—0.0236	—0.0107	0.0641	0.3719	0.1274	4 Gross National Product
5	0.9107	0.1381	—0.1036	—0.0132	—0.0943	—0.1400	5 Per capita National Product
6	0.8414	0.1094	—0.0493	0.0430	0.0241	—0.1733	6 Economic Development Status
7	0.6785	—0.1249	0.0663	0.3143	—0.1301	0.1802	7 Literary Rate
8	0.8078	—0.0302	0.0063	0.3042	—0.1962	—0.0173	8 Newspaper Circulation
9	—0.3361	—0.0659	0.0890	0.8447	0.0278	0.0905	9 Religious Homogeneity
10	0.3431	0.0628	0.0411	0.5761	—0.4029	—0.0962	10 Linguistic Homogeneity
11	0.8622	0.0566	—0.0666	0.0540	—0.1504	0.0216	11 Historical or Significant Westernization
12	0.7514	0.0034	0.2231	0.3037	0.0386	—0.0206	12 The Level of Political Modernization
13	—0.3614	—0.1250	0.0459	0.0070	0.0400	0.7755	13 Ideological Orientation
14	—0.0060	—0.4650	0.0682	0.2273	0.2432	0.6031	14 System Style
15	—0.0552	—0.0694	—0.8676	—0.1469	—0.2490	—0.0405	15 Government Stability since World War II
16	0.1658	0.8044	—0.0320	0.0426	—0.1993	0.0417	16 Representative Character of regimes
17	—0.0283	0.7430	0.1331	0.0451	0.3624	—0.2294	17 Competitiveness of Electoral systems
18	0.0911	0.8420	0.2288	—0.1591	0.0054	—0.1044	18 Toleration of Autonomous Groups in Politics
19	0.3376	—0.3392	—0.3826	0.5212	—0.1347	0.0056	19 Level of Political Enculturation

	Col—Factor 1	2	3	4	5	6	
20	−0.0570	0.0525	0.1475	−0.2928	0.7106	−0.0027	Level of Sectionalism
21	0.7807	0.2862	0.1219	−0.0137	−0.0795	0.0034	Interest Articulation by Associational Groups
22	−0.6342	−0.3447	−0.0479	0.0089	0.2322	0.2465	Interest Articulation by Institutional Groups
23	−0.0366	−0.1069	−0.8669	0.0231	0.1697	−0.0054	Party System Stability
24	−0.5110	0.0889	−0.2657	0.1636	0.5679	0.0888	Charismatic Leadership
25	0.2199	0.8378	−0.0234	−0.0403	0.0960	−0.0064	Effectiveness of Legislature

Total Contribution VP

Col—Factor 1	2	3	4	5	6
7,4407	3,3127	1,9427	2,0530	1,7295	1,4867

Original Variance—25,000
Variance Explained—17,965

Per cent of Original Variance—71.86

Per cent of Original Variance Col—Factor

1	2	3	4	5	6
29.76	13.25	7.77	8.21	6.92	5.95

Per cent of Explained Variance Col—Factor

1	2	3	4	5	6
41.42	18.44	10.81	11.43	9.63	8.82

appear to be associated with a high level of urbanisation,[38] a high literacy rate and newspaper circulation. These last three variables are important elements of Lerner's 'systemic' theory of modernisation.[39] Morroe Berger has noted the importance of this influence of 'westernisation' on public bureaucracies in less developed countries.[40]

Modernised countries have high propensity for interest articulation by associational groups.[41] Such countries also rank high in terms of Banks and Textor's political modernisation scale—a 4-point continuum ranging from advanced societies to pre-transitional societies.[42] Modernisation appears to be associated with low agricultural/total population ratios, low leadership charisma[43] and a low level of interest articulation by such institutional groups as the bureaucracy, the army, church, etc. These loadings appear to be quite meaningful in terms of political development theory. The more developed countries rely less on agriculture than on industry. Leadership, is de-personalised. In addition, no one autonomous institutional group, such as the army or bureaucracy, tends to dominate the power structure. Riggs' concept of 'balance of power' between bureaucracy and political groups tends to operate in such situations.[44]

The second factor is primarily a 'democratisation' factor and explains 18.44 per cent of the variance in the rotated matrix. Of the factors derived from our analysis, this comes closest to a purely 'political' factor but the substantive meaning of the loading deserves closer scrutiny. This is as follows :

Representative character of regimes	0.80
Competitiveness of electoral systems	0.74
Degree of freedom of group opposition	0.84
Legislative effectiveness	0.84

[38]Our findings on the relationship between urbanization and development tend to support those of Lipset and Cutright. *See*, S.M. Lipset, "Some Social Requisites of Democracy: Economic Development and Political Legitimacy", *ASPR*, Vol. 53, 1959, pp. 69-105; and Phillip Cutright, "National Political Development: Its Measurements and Social Correlates", *American Sociological Review*, Vol. 28, 1963, pp. 253-264.

[39]Daniel Lerner, *The Passing of Traditional Society*, Glencoe Ill., The Free Press, 1958, pp. 54-65.

[40]Morroe Berger, "Bureaucracy East and West", *Administrative Science Quarterly*, Vol. 1, 1957, pp. 518-529.

[41]Gabriel Almond and G. Bingham Powell, *Comparative Politics : A Developmental Approach*, Boston, Little Brown, 1966, pp. 78-79.

[42]Banks and Textor, *op. cit*, p. 78.

[43]This tends to support the thesis of Max Weber. *See* Max Weber, *The Theory of Social and Economic Organization* (edited with an introduction by Talcott Parsons), New York, Free Press, 1947, pp. 358-363.

[44]Fred W. Riggs, "Bureaucratic Politics in Comparative Perspective", *Journal of Comparative Administration*, Vol. 1, 1969, pp. 5-38.

This factor seems to index those variables that measure the degree to which a system is 'democratic'. Dahl's work on polyarchy and political opposition bears out the importance of conditions very similar to those denoted by these measures.[45] The term 'democratisation' is then assigned to this factor, for want of a better label.

The third factor appears to be even more substantially interesting than the first two. This factor explains 10.8 per cent of the variance in the rotated solution, and only following two variables load highly and negatively on this factor :

Government stability	—0.87
Party system stability	—0.86

Quite obviously, this is a political instability factor, seen from the direction and magnitude of the factor loading. This factor also suggests that instability of political parties appears to be associated with the general rise and fall of governments. This contention is borne out by the original correlation of 0.63 between the two variables. The pervasive phenomenon of political instability, especially in the Afro-Asian and Latin American nations, has been treated considerably by Eisenstadt, Huntington, Almond and Powell, and Riggs.[46]

The fourth factor directly conflicts with the initial assumption that social and cultural variables are not exactly distinguishable from each other in less developed areas. The factor solution has somehow extracted an independent cultural integration dimension from the data. The three variables indexing this dimension are :

Religious homogeneity	0.84
Linguistic homogeneity	0.57
Political enculturation	0.52

This factor explains 11.4 per cent of the variance in the rotated solution and bears out the importance of the cultural integration component in administrative ecology. Furthermore, it necessarily posits a strong association between religious and linguistic homogeneity which tends to be found simultaneously with a higher level of political enculturation (the latter measured in terms of degree of opposition and

[45]Rebert A. Dahl, *A Preface to Democratic Theory*, Chicago, University of Chicago Press, 1956; *Political Opposition in Western Democracies*, New Haven, Yale University Press, 1965.

[46]S.N. Eisenstadt, *The Political System of Empires*, New York, Free Press, 1963; Samuel P. Huntington, *Political Order in Changing Societies*, New Haven, Yale University Press, 1968; and Gabriel Almond and G. Bingham Powell, *op. cit.*, and Fred W. Riggs, "Theory of Political Development", in James C. Charlesworth (ed.), *Contemporary Political Analysis*, Glencoe, Free Press, 1967, pp. 317-349.

absence of communalism, factionalism and disenfranchisement or political non-assimilation).[47] High levels of political enculturation probably require high levels of religious as well as linguistic homogeneity.[48]

The fifth factor explaining 9.6 per cent of the variance has been loosely labelled an 'ethnic diversity' factor. Surprisingly, variables expected to load on socio-cultural and communication factors load instead on this factor. That this factor emerged as an independent dimension—from that of the cultural integration domain—is also interesting. Development literature on the cultural pluralism phenomenon in developing countries tends to imply that ethnic diversity forms an important element in the political culture of these nations.[49] The findings here, although not conclusive, suggest that ethnic diversity may possibly be distinct from other cultural elements, such as language and religious value systems.[50] The variables loading on this factor are :

Sectionalism	0.71
Charismatic leadership	0.57
Linguistic homogeneity	—0.40

The third variable was included in order to aid in the labelling of this factor. Although it is not quite as high as the cut-off point of ± 0.50 it does appear to be consistent with the loadings on sectionalism and charismatic leadership. Countries with high sectional cleavages also tend to be countries that are characterised by personalistic types of leadership and areas that are linguistically heterogeneous, *e.g.*, countries of Asia and Africa.

The last factor explains about 8.3 per cent of the variance. It was loosely called an 'ideological-systemic' factor, primarily because of the variables loading distinctively on this factor :

Ideological orientation	0.77
System style	0.60

[47]Banks and Textor, *op. cit.*, pp. 87-88.

[48]For a study of the interaction between religious homogeneity and politics, *see* Donald Eugene Smith, *Religion and Political Development*, Boston, Little Brown, 1970. For references to linguistic homogeneity in relation to administrative development, *see* Riggs, *The Ecology of Public Administration, passim.*

[49]Frederick Von der Mehden *et al., Issues in Political Development*, Englewood Cliffs, N.J., Prentice Hall, 1967.

[50]For an interesting study on this subject, see Juan J. Linz and Amando de Miguel, "Within Nation Differences : The Eight Spains", in Richard L. Merritt and Stein Rokken (ed.), *Comparing Nations*, New Haven, Yale University Press, 1966, pp. 267-319.

The first variable was measured on a 5-point scale ranging from doctrinal ideology to traditional ideology.[51] System style was measured on a 3-point scale ranging from mobilisational style to non-mobilisational style.[52] Ideology appears to be a component, independent of modernisation, stability, and cultural integration and, as such, appears as an important dimension of administrative ecology.[53]

SUMMARY

A factor analysis of 25 ecological variables found to be highly related to Banks and Textor's index of the character of public bureaucracies revealed six distinct dimensions as opposed to the four originally hypothesised. These four hypothesised dimensions consisted of an economic factor, a communication factor, a socio-cultural factor and a political factor. The factors emerging from the data were : a modernisation factor, a 'democratisation' factor, a political instability dimension, a cultural dimension, an ethnic diversity dimension, and an ideological-systemic component. Apparently, the hypothesised ecological dimensions do not adequately portray the complex structure described by the variable under study. The findings are at variance with the original hypotheses of this study, as well as with the findings of John Forward. Political elements appear to be pervasive throughout the ecological dimensions that characterise the environment of public bureaucracies; even culture has distinctively political characteristics. The findings appear to be consistent with literature dealing with the interaction between administration and its political environment and lends credence to the idea that public administration does not operate in a vacuum but rather in the centre of complex socio-economic, cultural and political phenomena, continually interacting with them.

□

[51]Banks and Textor, *op. cit.*, 80.

[52]*Ibid.*, 82.

[53]The significance of ideology in the modernized western states is underlined by Joseph LaPalombara, "Decline of Ideology : A Dissent and an Interpretation", *APSR,* Vol. 60, 1966, pp. 5-16. LaPalombara questions the theses of Aron, Lipset and Bell. Our findings tend to support LaPalombara's hypothesis.

Power Relationships in Modern Bureaucracies*

Michel Crozier

BUREAUCRACY AND bureaucratisation have become fashionable catchwo ds among social scientis s. But most writers have been interested only in characterising the formal and theoretical aspects of bureaucracy; they describe the social roles a bureaucratic organisation fosters, analyse the discrepancies between democratic ideals and conservative formalistic ules and tend to neglect the study of the internal functioning of bureaucratic organisations.

The following generalisations represent a rather different approach, assuming that power relationships are one of the key spots for observing human behaviour within large-scale organisation and human relationship associated with the pejorative connotation 'bureaucracy' (relationships between groups, authority patterns, participation and integration) and the extent to which bureaucratic systems can be explained as rational responses to specific aspects of the environment in which they operate.

The data on which these generalisations will rely, come from the successive study of two French public administrations whose staff was submitted to a series of observations in its daily activities, to a systematic programme of interviewing and to some feedback experiments. These administrations are not typical of the public service in general and even of the French public service in particular as much as they are rather marginal as regards their activities, one being a part of the postal service, the most industrial part of the traditional State services, and the second being an industrial monopoly whose functions are very often the realm of private enterprise in other countries. They are nevertheless very well suited for our aims since, first, they can provide much more easily possibilities of comparison because of the relative similarity of their goals with those of private industrial concerns, and second, due to the fact of the very peculiar and even pathological difficulties they have to face, they make it possible to observe in a most acute form some of the ultimate consequences of a bureaucratic system of organisation.

THE WEAKENING OF DIRECT AUTHORITIES AS A CHARACTERISTIC OF BUREAUCRATIC ORGANISATION

The first characteristic pattern, that could be seen among the results of both organisations, was the relative unimportance of direct hierarchical authority in the system. But this lack of direct authority did not mean there were no problems of dependence within and without the formal hierarchical line. On the contrary, there were a lot of tensions between hierarchical categories with direct consequences for the morale of the whole staff but these tensions always bypassed the face to face relationships.

Take the example of the first organisation, a large-scale autonomous agency of the postal service. The morale of the staff (5000 employees, mostly women) was very poor and it was assumed by the higher management that there was great deal of resentment amongst employees against the first line supervisors because of the difficult working conditions and because of the poor handling of human relations by these supervisors. Contrary to these expectations the first line supervisors (in charge of 100 employees) appeared rather well-liked by their employees, but the five higher supervisors (in charge of 1000 employees each) were polarising all hostility. Moreover, this pattern was duplicated one step higher where the first line supervisors had rather favourable attitudes toward the immediate bosses but presented very bitter comments against the general direction.

When analysing this pattern with due regard to the concrete situation of each group, these attitudes appear quite rational in a system where :

1. Complete seniority and stringent working rules make it actually impossible for the immediate supervisors to interfere with the situation of anyone of his subordinates.
2. Power of decision for the areas remaining open to supervision has been pushed up one step above the immediate supervisor, so that the man who will take a decision will not be in direct relationship with the employees or supervisors whose situation he is going to affect.
3. There is no mechanism for informing the higher supervisors about the actual situation with which the immediate supervisors have to deal other than by means of their own (the immediate supervisors') reports. This information is necessarily biased and consequently the resulting decisions tend to be inadequate. This leads to poor morale and employee hostility not against the immediate supervisors who are not perceived as being responsible but against those higher up in the bureaucratic hierarchy.

Going one step further and examining why power of decision may be so located, it appears that employees, first-line supervisors and higher supervisors alike prefer the risk of inadequate decisions to the risk of losing their group autonomy and their ensuing personal independence under a system of direct hierarchical power. As subordinates they fear petty tyranny and as supervisors employees' hostility and reprisals. In both cases routine and 'bureaucratic' decisions finally seem to offer better solutions when face to face relationships become unbearable.

Such a line of interpretation suggests that new studies using the tools of social psychology and cultural anthropology could give very decisive cues for understanding the pressure for centralisation in different countries and more generally the basic differences in administrative behaviour.

THE DEVELOPMENT OF PARALLEL POWER RELATIONSHIPS

The weakening of hierarchical authority does not mean for the members of a bureaucratic organisation that they become free from any kind of personal dependence. New pressures for conformity and new 'parallel power relationships' will develop. We have tried to analyse those unintended consequences of a bureaucratic system of organisation in our second study bearing on three factories of a major industrial monopoly and they appear to be in those cases especially striking.

These plants have a very simple organisational chart : one director and one assistant director on top, both graduates of the higher theoretical engineering school in France, the director being in charge of the whole enterprise, the assistant director being responsible for production, one technical engineer graduate from a minor engineering school in charge of maintenance repairs and all auxiliary works, and one administrator in charge of buying, accounting and personnel; then at the supervisory level, ten first-line and five second-line supervisors and at the workers' level fifty maintenance workers of a very high degree of qualification depending from the technical engineers and four hundred production workers, two-thirds of them being women.

Bureaucratic patterns are more developed than in our first study. Within each category (production workers, maintenance and even supervision) all jobs are allocated strictly along seniority lines which means that any new job or even the temporary vacancy of one job is filled according to the general rule, the senior willing employee or the most recent non-willing one. In counterpart, there is no possibility of promotion from one category to another. Recruitment is done

from the outside through open competition. Inside the plant working rules cover every conceivable situation and there is almost no possibility of individual decision by an immediate supervisor. The supervisor's and even the manager's role is more a judicial one than one of an industrial leader. What he has to worry about is what rule to apply and what is its real meaning—and his interpretation is checked and discussed and may be appealed. At the manager's level the development of general policies of the general direction allows for little initiative. The intervention of very strong trade unions still further restrains their authority by making it probable that all decisions with a labour relations angle will be appealed to the general direction.

As expected there was very little direct hierarchical power in such a system. No tension existed between supervisors and production workers and whatever problems arose bypassed the supervisor's level with the consequence of workers' hostility being focused on the director and assistant director.

Three important new features, however, could be observed :

1. The pressure of the group on the individual seemed to be much greater than in comparable private organisations. Most significant in that respect was the pattern of answers to our questionnaire which showed for a great number of questions no variation from plant to plant and almost stereotyped reactions on matters important for the status of the groups. The influence of the environment for those matters was striking when one compares the newcomers with the workers having more than two years seniority. The former ones are two-thirds favourable to the development of mechanisation, for examples when the latter are almost unanimously opposed to it. Finally in a feedback experiment, we observed the inability of any individual to express in unorthodox point of view in front of other members of his group even when this point of view had been expressed by the majority of his colleagues who were present at the experiment right at that moment.

2. In the areas where there seemed to be no pressure of the group, the individual reactions showed tremendous individual and plant differences, at any rate much greater variation than is usually expected in industrial organisations. These areas of freedom were the areas of personal and individualised relationships. There seemed to be a clear-cut opposition between a world of the rules and the adjustment to the rules where the individual is pressured into conformity and a private protected world where the individual can express his own feelings in the wildest way.

3. Power relationships that have almost disappeared along the hierarchical line develop along informal lines creating new dependence situations and new sources of tensions.

The last point needs elaboration. When one studies the triangular relationship, production workers—maintenance workers—supervisors, one notices:

(*a*) That production workers are moderately well adjusted to their situation and under considerable group pressure; that supervisors are very much dissatisfied, have rather noncoherent reactions and seem best adjusted when they renounce group values; and that maintenance workers are passionately satisfied, proud of their workmanship, aggressive and seem best adjusted when critical of other groups.

(*b*) That relationships between production workers and supervisors are cordial and conventional—while relationships between production and maintenance workers are overtly hostile with an acute feeling of dependence on the part of the production workers and a great uneasiness on the part of the maintenance people. (This hostility, furthermore, is an important factor for satisfactory adjustment for the production workers.) And finally, the relationship between maintenance workers and supervisors is one of over tension with strong and complementary accusations from both sides, but with deeper feeling of inferiority on the part of the supervisors.

How such dependence relationships can develop ? The observation of the respective behaviour of the different groups concerned suggests the following interpretation :

In a bureaucratic system of organisation where formal rules cover most any kind of happening and where the behaviour of every individual employee has to follow strictly the approved patterns, events that can't be foreseen and for which no formalisation of behaviour can be worked out take on a very disproportionate importance and the people who can control them are invested with a great deal of power over the rest of the employees. Maintenance workers are in such a position since the stoppage of the machines is the only event that can break routine patterns in the shop and since it is impossible for anyone but the maintenance workers to evaluate the time necessary for repair. In comparable plants in other countries with exactly the same technology, but a different type of organisation, machine stoppages were not considered of such great importance. There, many other sources of uncertainty were competing with the machine maintenance one.

So one can formulate the hypothesis that *in a bureaucratic system where the tendency to eliminate all sources of uncertainty have been carried to the extreme, power goes to the individual or to the groups who are in control of the last source of uncertainty.*

One might wonder why it is possible that such a kind of relationship so contrary to the formal rules could last. Most generally the hypothesis we have formulated must be partially checked at least by the influence of formal hierarchy. But here, as we have seen, formal hierarchy is dwindling and furthermore management itself is going through the same fight over control that we saw at the shop level. The analysis of the engineers' interviews showed the same kind of tension between polytechnics' graduates and technical engineers as between maintenance workers and supervisors. The technical engineers are well adjusted and aggressive and tend to become all the more satisfied as they become more aggressive. Their superiors, on the contrary, are much less satisfied and seem to be best adjusted when renouncing at least part of the values of their group. The technical engineers who have no possibility of promotion whatsoever are consistently hostile (to the point of violent hatred) to their superiors and they have the possibility of blocking their power by controlling all the sources of uncertainty within the plant since the repair and maintenance workers are under their control. One could not expect them to renounce this possibility of revenge. They most consistently cover up for their subordinates, the maintenance people, and so make it possible for the system to last.

Finally one could formulate a complementary hypothesis : *The separation between strata, another characteristic of a bureaucratic system of organisation complementary to the seniority and equality principle, makes it possible for the conflict over power to be a fight between groups and a clear and a more acute one.*

SOME GENERAL HYPOTHESES

For anyone interested only in the actual description of the facts, the results we have reviewed cannot be generalised. We have already emphasised the marginal character of the two organisations studied. They certainly give a partial account of the way modern bureaucracies and even French bureaucracies operate. However, as our interpretations have shown, they offer, because of their peculiar features, a stimulating challenge for the social scientists. In that perspective, we would like to discuss now the general implications of our different hypotheses and make a first attempt at clarification.

The extreme examples of bureaucratic impersonality we have analysed in our two cases have developed only because of a peculiar

combination of cultural, technical and economic factors that maximises certain bureaucratic possibilities.

The key point in these systems of relationships we have analysed appears to be the complete autonomy of each member of the staff from any kind of arbitrary authority. This implies strict equality between members of the same category—the only differentiation possible coming from seniority—the impossibility to promote from one category to another, the recruitment of the new members through open competition and generally the lack of communication between such isolated categories. This pattern is achieved by attempting to eliminate all possible sources of uncertainty which means practically by prescribing detailed types of behaviour for all foreseeable events and by centralising all remaining decisions at such a level that they will also be impersonal. Its development seems to be possible because of two series of factors. First, stemming from the French cultural background, there is a very strong pressure for eliminating power relationships. Second, there is no counter pressure for efficiency obliging to rely on individual ingenuity *id est* arbitrary power.

Such a scheme of interpretation implies the following more general propositions which we would like to propose for further research:

1. In modern complex organisations there is a general pressure from the part of the staff for the elimination of all sorts of power relationships. This pressure is one of the great forces behind the progresses of centralisation and bureaucratisation. But it depends at least partially on culturally bound attitudes and behaviours which accounts for striking differences between countries at the same stage of industrial development.

2. The general development of technology by making it possible to eliminate many sources of uncertainty provides the necessary background for the overall trend for bureaucratisation but it leaves a great deal of margin for the influence of social and economic forces.

3. Routine types of behaviour and cumbersome processes that are usually associated with the pejorative connotation of the term 'bureaucratic' correspond to attempts at eliminating uncertainty that are both artificial and unsound. They tend to develop in economically protected activities and all the more when the patterns of authority are authoritarian rather than democratic.

4. Democratisation of authority and training for accepting authority and responsibilities in face to face relationships offer the only possible alternative to the overdevelopment of centralisation and bureaucracy. ☐

The Organic Model and Innovation in the Developing Nations*

M. Sayefullah Bhuyan

IN RECENT past there has been an abundance of literature challenging the relevance of the western experience in administration to non-western situation. Victor A. Thompson bases his criticism on the following assumption :

> Administrative practices and principles of the west have derived from preoccupation with control and therefore have little value for development administration in underdeveloped countries where the need is for adaptive administration, one that can incorporate constant change.[1]

Thompson comes forward with a new approach, one patterned after the organic model as originally developed by Burns and Stalker.[2] The organic is one, Thompson argues, will work in all countries, developed as well as developing.[3]

The paper will consist of three parts. Part I will summarise Thompson's organic model. Part II will be a critical examination of the model itself. And finally, the paper will consider its exportability to the developing nations.

[1] Victor A. Thompson, "Administrative Objectives for Development Administration", *Administrative Science Quarterly*, Vol. 9, 1964, p. 91.

[2] Tom Burns and C. M. Stalker, *The Management of Innovation*, London, Tavistock Publications, 3rd ed., 1968, Ch. 6, pp. 119-125. They argue that the mechanistic model is suitable to stable social conditions, whereas the organic model is more appropriate to changing socio-economic conditions. The location of leadership is determined not by organisational chart, but by consensus of the working members of the organisation.

[3] Victor A. Thompson, *Bureaucracy and Innovation*, University of Alabama, University of Alabama Press, 1969. Although claiming the model as universal, in his book he is referring especially to advanced industrial societies. However, he argues that any administrative organisation, desiring to be modern and adaptive, needs the organic model.

A BRIEF SUMMARY OF THE ORGANIC MODEL

Thompson, in a number of his articles and book, offers a severe criticism or what he calls the monocratic or Weberian model of administration. Such a model Thompson thinks:

> ...dictates centralised control over all resources. It stresses iron discipline from the top down, enforced by the centralised administration of extrinsic rewards such as money, power, and status, because it demands the undifferentiated time and efforts of its members in the interests of the owner's goals. Even as the organisation is a tool, so are all of its participants. There is no place for 'joy in work'. To admit the propriety of joy in work would be to admit an interest other than the owner's and to lose some control over the participants. Carried to its logical extremes the only person in the monocratic organisation who could innovate would be the owner (top man).[4]

What does innovation mean to Thompson ? Thompson defines innovation as the generation, acceptance, and implementation of new ideas, processes, and products or services is stifled in the monocratic organisation. To be innovative, according to Thompson, is to be creative. Creativity, again, needs certain empirical conditions which suggest a golden mean :

> . . . some freedom, but not too much ; high internal commitment to the task, but not too high a commitment ; a high proportion of intrinsic rewards, but some extrinsic rewards as well ; some competition, but not cut throat, winner-take-all competition.[5]

Besides these, other organisational features needed for creativity are flexibility, pluralism, multiple approaches and overlapping.

Thompson seems to have been obsessed with the bureaupathology of modern organisations which can be avoided, he thinks, by the introduction of a greater amount of professionalism and technology. The professional or specialist, Thompson states, is one who has had a long period of pre-entry preparation for his work; he does not come to the organisation empty handed to sell his undifferentiated time and energy to be used as management thinks best ; his work as a professional is a source of great personal satisfaction and is not determined by the organisation; and as a professional he belongs to and develops associations which protect his work and work standards from organisational opportunism and authority.

[4] Thompson, *Bureaucracy and Innovation, op. cit.*, p. 17.
[5] *Ibid.*, p. 11.

Professionalism, then, is posited by Thompson as an alternative to bureaucracy as a social control. Thompson argues that as a system of control it is pluralistic and collegiate rather than monocratic and hierarchical. Thompson believes that with the increase in the number of professional personnel and their induction in organisations one would naturally expect to see less administration by top-down commands, less unquestioning obedience, less restriction of communication, less parochialism and non-cooperation of organisation units. As a result of the break-down of hierarchy, organisations would more closely look like societies of equals, and human relations in them would, as a result, become more humane and dignified. These changes would provide creative environment for greater innovativeness.

A CRITICAL EXAMINATION OF THE MODEL

Thompson's organic model apparently seems very enticing. However, before it is wrapped up and exported abroad as a remedy for the administrative ills of developing nations it would be desirable to see if the model will work in the developed western societies themselves.

The most important criticism that can be made is that Thompson's empirical conditions do not sound so much as empirical conditions as they do proverbs of administration. As Simon states, "since one is never at a loss to find one that will prove his point or the precisely contradictory point, for that matter—they are a great help in persuasion, political debate, and all forms of rhetoric".[6] However, "for almost every principle one can find an equally plausible and acceptable contradictory principle".[7] Is this true of Thompson? Much of it; I believe, is. The following examples can be used in support of my proposition. Thompson's call for more professionalism as a means of solving problems *via* less hierarchical control and greater manoeuvrability laterally resembles Simon's point and counter-point on the common principle offered that "administration efficiency is increased by limiting the span of control at any point in the hierarchy to a small number". This principle is supported by certain plausible arguments. However, Simon offers another principle in opposition. That is, "administrative efficiency is enhanced by keeping at a minimum the number of organisational levels through which a matter must pass before it is acted upon". This principle too is backed by arguments of equal plausibility. How does one know that less hierarchy and more lateral interaction by professionals is the answer for innovation and creativity? Could it not be argued that

[6]Herbert A. Simon, "The Proverbs of Administration", *Public Administration Review*, Vol. 6, Winter, 1964, p. 53.
[7]*Ibid.*

the challenge and tension created by a monocratic organisation are associated with scientific effectiveness?[8] Perhaps what the professional needs is more pressure and tension, not less; perhaps creativity is bred under conditions of pressure and tension. This might not be considered humanly desirable by many, but certainly an argument could be made for it.

Another of Thompson's arguments which sounds like a proverb is that creativity and innovation are stimulated by internal commitment and intrinsic rewards. Extrinsic rewards such as money and power, Thompson argues, are less important to the professionals. How one could ignore the importance of an extrinsic reward such as money in an age of inflation? Could it not be argued that while in times of abundance money may not be an inducement and intrinsic rewards might be weighted more heavily, in times of inflation and high unemployment the professional may be inspired more by extrinsic rewards such as money?

Finally, one should consider the values and assumptions that accompany the model. Thompson argues that "if an organisation, or any group, is to act as an entity, it must have a body of doctrine, an ideology, that explains what it is doing and what it ought to do."[9] The question then must be asked : what are the values and assumptions of the organic model? One will find that the model contains values like mutual trust and confidence, spirit of tolerance and compromise, greater freedom and individualism, pluralism and democratic decision-making. Do not these values coincide with the notion of American liberal society? If so, one should ask : are these values widely rooted in the developing countries?

Presumably, the organic model is embedded in the 'value-system' of the western industrial societies. But I am not even sure it will work in the post industrial societies. However, Thompson insists his work is backed by empirical research. Let us then, for argument's sake, accept that his model is scientific, that he does not offer proverbs but empirically validated statements, and that the model will work in the United States. The important question to be examined in this paper is : can we assume the model will work in developing nations?

WILL THE ORGANIC MODEL WORK IN DEVELOPING NATIONS?

I would tend to argue that it will not. Thompson's assumption is that the role of the professional is critical in making the organisation more flexible, adaptive, and cosmopolitan. If the professional is needed

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[8]Donald A. Pelz and Frank M. Andrews, *Scientists in Organizations*, New York, John Wiley, 1966, as quoted in Robert J. House, "Critique of Bureaucracy and Innovation" in *Administrative Science Quarterly*, Vol. 15, 1970, pp. 243-245.

[9]Thompson, *Bureaucracy and Innovation, op. cit.,* p. 29.

to infuse fresh blood to make the organisation adaptive and innovative, then most of the developing nations are operating under a severe handicap. These countries are running short of adequate number of professionals, specialists, and technicians. The situation becomes more complicated in these countries due to the flight of a good number of highly-trained professionals and technologists abroad for gainful employment.

Moreover, how can we be certain, the professionals will be held more responsible and responsive to the public than a civil servant? Are not the semi-attached intellectuals and professionals (Shils, 1973) of the privileged groups in society? Although diverse in appearance and segmented in terms of interests, the professionals tend to follow a collaborationist strategy to satisfy their own interest. They have a stake in maintaining the *status quo*, simply because their values and interest do not seem to be different from those of the 'career bureaucrats'. Is it not too much to expect from the professionals who are operating under a series of constraints or limitations inhibiting the development of a cosmopolitan view of things? The constraints or limitations result from the limited resources available in these countries. The professionals are less likely to develop a spirit of sacrifice and dedication unless they are materially secured. Assuming, however, the professional is motivated by his own interests and family obligation, will he be able to communicate and implement his programme? As Furnivall has stated his own experience in colonial Southeast Asia, "the great mass of the population did not understand the expert nor did the expert understand the public."[10] The implication that follows from the above statement is that the expert implementing innovations in the public sphere seems to be enormously difficult.

The mere presence of professionals implies, as Thompson argues, a strong outside technical infrastructure. Is not Thompson ignoring the realities of the developing nations? He seems to assume that such an infrastructure does already exist in these countries. It is, of course, true in the case of the industrially developed nations. When an innovation was introduced in the industrialised nations some form of infrastructure existed to support it before it came. "In the newly developing countries the reverse is true—the innovation arrives first and the task of building its infrastructure follows."[11] Hence the logic of the situation suggests that an infrastructure to adequately support the technology

[10]J.S. Furnivall, *Colonial Policy and Practice*, Cambridge, Cambridge University Press, 1948, p. 420 as quoted in R.S. Milne, "Mechanistic and Organic Models of Public Administration in Developing Countries", *Administrative Science Quarterly*, Vol. 15, 1970, p. 60.

[11]Edward A. Kieloch, "Innovation in Administration and Economic Development", *Indian Journal of Public Administration*, Vol. 12, 1966, p. 601.

involved has to be constructed. What must be attempted is a reversal of the western experience where the development of the socio-economic conditions and entrepreneurial organisations existed before the rise of modern bureaucratic structures.

The success of the organic model depends on many factors. Mutual trust and cooperation are some of the critical elements necessary for the working of the model. These qualities are conspicuously absent in most of the developing countries. Primordial loyalties such as ethnicity, religion, linguistic and tribal politics often prevent the growth of social ethos of cooperation and mutual trust among the professionals themselves. The question one should ask: would the professional status be sufficient in itself to overcome the differences between, say, the Chinese minority and the native Malaysian? The same question may be asked of Sri Lanka. How much trust is there between the Tamils and the Sinhalese? Can the Punjabis be trusted in Pakistan? How much loyalty and trust would there be when many of the professional skills are dominated by a minority racial or tribal element as, for instance, has occurred in some parts of Africa? The objective realities of the developing countries seem to suggest that the professionals are apt to feel greater loyalty to their own ethnic or linguistic groups than to their profession or organisation. The recent experience in developing countires like Pakistan and Bangladesh, where the professionals showed intense loyalty to their own ethnic and linguistic groups, is an illustration to the point.

The social cleavages are so severe in these countries that any possibility of decentralising the bureaucracy is ruled out. Rather centralising bureaucracy is an answer to make it more adaptive to the needs of the society. It seems plausible to argue that the organic model is better suited to homogeneous societies. However, even if the society is homogeneous, in a developing nation it might also be hierarchical. In a status-conscious society with non-egalitarian values, the hierarchical structure would seem to be more conducive to importing the mechanistic monocratic model rather than the organic model.

The assumption that the organic model will work in the developing nations can be challenged on the ground of culture-bound values which the model seems to carry with it. It would, perhaps, work in a 'post-industrial' society with a growing number of professionals who are loyal to the values of their profession as well as to liberal democratic values such as individualism, mutual trust and cooperation, equality, democratic decision-making. Where these values are conspicuously absent or where greater loyalty is paid to family, clan or clique, one might expect the organic model unworkable.

If one is not careful, the accent on cultural restraints as the independent variable will lead to some pessimistic conclusions. This is what happened in the case of some scholars such as R.S. Milne and F.T.

Bent.[12]   Milne has stated that both the organic and mechanistic models are better suited to the more developed nations.   Bent, in his study of of the Turkish bureaucracy, argues that structural alterations will be virtually useless because cultural determinants will render them ineffective.

The culturalists, in general, come to the conclusion that administrative reforms and innovations must be viewed in terms of environmental and cultural conditions and that, for the time being, both Weberian mechanistic model and the organic 'development administration' model will be limited in effectiveness by culture.   Undoubtedly one could argue reasonably that a culture with very heavy aspects of the traditional, charismatic elements and little of the rational element will limit the effectiveness of both the Weberian and the organic models.   Does this situation warrant the pessimism that sees little hope for administrative development and innovation in developing nations? Perhaps, as J. Nellis has argued, the concern with ecological and cultural constraints is somewhat a bit outdated.[13]

The study of developmental administration has passed through a phase when many social scientists in the 1950's and 1960's had raised high hopes that western technology and models would achieve wonders. Unfortunately, when the take-off did not occur, ecological and environmental constraints were blamed, and the resulting frustration led to cynicism, defeatism and pessimism. Our understanding of administrative behaviour in transitional societies can lead to confusion; or clarity may depend, to a large extent, upon the appropriateness of the models we choose to work with.   There is a danger in importing western model uncritically to non-western situation.   This is to avoid this danger, some critics would argue, "that it is better to go directly to the subject matter concerned without reference to any model".[14]

Underdeveloped nations cannot depend on the arrival of all the apparatus and environmental factors which make monocratic-mechanical or organic model useful or potentially useful in industrialised societies. In fact, the developing nations may not choose to adopt those models either. What they need is to look more inward than outward to discover their specific administrative problems and to adopt needed reforms. As Ilchman has stated regarding the public servants of developing countries:

Given the inputs at their disposal and the margin next to which they

[12]F.T. Bent, "The Turkish Bureaucracy as an Agent of Change", *The Journal of Comparative Administration*, Vol. 1, May 1969.

[13]J.R. Nellis, "Is the Bureaucracy Developmental?", *African Studies Review*, Vol. 14, No. 3, December, 1971, p. 399.

[14]Fred W. Riggs, *Administration in Developing Countries*:   *The Theory of Prismatic Society*, Houghton Mifflin Co., Boston, USA, 1964, p. 5.

live, they are among the most rational allocators in existence—efficient though not effective; able by some miracle to produce that irreducible minimum; unable, by any technique of social organisation, to raise the level of output more than five or ten per cent.[15]

Further, he suggests, if western expertise and gadgetry were accepted, they might be less able to achieve what they have in the past. Indeed, their constant reference to western society and technology may very well be self-defeating, as Dwight Waldo has so clearly pointed out.[16]

As Goran Hyden has pointed out, there is a great need for administrative case studies in developing countries—studies designed not so much for implementing western models and organisations as for ascertaining what the real structures are.[17] With the emphasis on environmental constraints, the administrators are observed by some scholars mainly from without. What seems to be imperative is to see him in his structural context and to see how organisational rules and public role expectations influence his behaviour. Bureaucracies in developing countries have some type of organisational structure, even if it is not the desired one, affecting administrative behaviour. More case studies of this aspect may be especially illuminating and helpful. The kind of case studies that need to be done are on cultural and environmental constraints. This is, of course, a difficult job. Most of the case studies on administrative problems in developing countries have been done by outsiders who tend to see things from their preconceived ideas and values which they carry with them. Moreover, these scholars neither have adequate time nor willingness to venture out and make studies outside the comfort of the capital city. One wonders just how reliable their results were. It serves to illustrate that too often recommendations for and innovations are made in the dark. In spite of obvious limitations (both human and material), indigenous scholars should be encouraged to undertake to such case studies which may genuinely reflect their country's peculiar administrative problems.

While awaiting the results of these studies, the developing nations should embark on administrative reforms and innovations with their existing knowledge. A recent study by Robert Chambers and Deryke Belshaw indicates that improvements may be made through better procedures that do not cost much and that do not presuppose a major

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[15]Warren F. Ilchman, "Decision Rules and Decision Roles", paper presented to the Conference on Comparative Administration, Arusha, September 25-28, 1971, p. 14 as quoted in G. Hyden, *op. cit.*, p. 260.

[16]Dwight Waldo, "Reflections on Public Administration and National Development", *International Social Science Journal*, Vol. XXI, No. 2, 1969, pp. 294-313.

[17]G. Hyden, *op. cit.*, pp. 269-70.

reorientation in mind, although the effect may be precisely that.[18] Their study reveals the lack of innovation and implementation as being the fault not of the field workers but of those in the central offices of the capital city. Too much effort was spent on plan formulation and budgeting and too little on programming, implementing, monitoring, evaluating and reformulating the plan. Chambers and Belshaw, as Nellis has pointed out, worked with all levels of Kenyan officials; they experimented and tested their procedures; they simplified, at field officer suggestion, their original ideas; they emphasised principles rather than details; and they concentrated on field output rather than academic analysis. As a result, their system met with success and enthusiasm.[19]

Nevertheless, Professor Nellis remains "if not dubious, at least a bit ambivalent about the future of the innovation."[20] He fears that the concentration of Chambers and Belshaw on field acceptability may not have created a sufficiently committed, informed and powerful Kenyan clientele at the centre in Nairobi, who are able in the authors' absence to push for the new system. He refers, as an example, to Daniel Moynihan's point that innovators are often temporary and their presence in the system is of short duration.[21] However, a suggestion made a few years ago by K.A. Butani in his article, "Implementing Administrative Innovations and Reforms", might be of help.[22] Butani asks: what are the essential requirements of an implementing machinery in a developing country which could ensure that proposals for administrative innovations and reforms are implemented with speed and effectiveness? He suggests as one requirement, the establishment of an adequate agency for follow-up action. Its purpose would be to see that concerned organisations give an adopted innovation a fair try, and to study and help them with the problems of implementation.

Since Butani does not expand his idea any further, I would like to carry it from where he stopped. This agency, in my opinion, must be made more than adequate. It must have the full backing of the highest executive or legislative authorities, and it must have all the prestige that can be given to it. It could recommend changes, and could reward handsomely those who cooperated and possibly sanction those who resisted

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[18]Deryke Belshaw and Robert Chambers, *Managing Rural Development*: *Lessons and Methods from Eastern Africa*, Brighton, UK, University of Sussex, 1973.

[19]J.R. Nellis, "Comments on the Belshaw-Chambers System : Problems of Acceptance and Implementation" (Unpublished paper, Department of Political Science, Carleton University, Ottawa, Canada, 1974).

[20]*Ibid.*, p. 4.

[21]Daniel Moynihan, *Maximum Feasible Misunderstanding*, New York, The Free Press (paper edition), 1970, as quoted in J.R. Nellis, *ibid.*, p. 12.

[22]K.N. Butani, "Implementing Administrative Innovations and Reforms", *Indian Journal of Public Administration*, Vol. 12, 1966, p. 615.

stubbornly. Hopefully, such an agency would serve as a countervailing force against bureaucratic inertia. The unwilling administrators who are in vital places of command might be persuaded through the inducement of rewards that innovation and reform are in their self-interest: Training of personnel for a system such as this would help too.

Just because the Weberian and organic models cannot be implemented in developing nations, as western scholars would desire, it does not mean innovation and reform cannot proceed. Though results may not be optimal, they may not be disastrous either. They could be, in the words of Herbert Simon, 'satisficing'. Nor does it mean that we should entirely give up hope for grand and rapid solutions. But it does mean, for the time being at least, that there must be a greater emphasis on local training, local solutions to local problems, and more case studies. Such an approach, by increasing the knowledge available on practical change in administration in developing nations might well lead to theoretical innovations, and from this we might go on to broader theorisation.

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Innovations in Bureaucratic Systems*

Hans Christoph Rieger

IN SPECULATING about the future, there seems to be a tendency to focus attention on the more glamorous aspects of mankind's capabilities and technological potentialities. Hence, some of the more earthy and perhaps less exciting developments that may reasonably be expected are often ignored or insufficiently explored. Furthermore, processes and structures that look as if they are likely to remain constant and stable over time, do not seem worth mentioning when discussing the dynamic or explosive trends of other variables that are likely to influence future environments. In this article, we intend to show how in the case of one example, this preoccupation with the glamour of dynamics may lead to a biased view of future society, and to indicate a field in which further futurological research would consequently seem particularly fruitful. This is the field of bureaucratic systems. The most likely technological advances in the future and developments in other fields may have a number of important implications for bureaucratic administrations and the large-scale organisations that characterise modern industrial societies—whether capitalist or communist. We propose to look at some of these implications, initially under the simplifying and perhaps unrealistic assumption that the types of bureaucratic systems available remain essentially the same, *i.e.*, there are no substantial efficiency increases in the kinds of administrative machinery currently in use. It may be stressed at the outset that here, we can do no more than sketch the problem and indicate some directions for further work. A complete and exhaustive analysis is well beyond the scope of the present article.

BUREAUCRATIC SYSTEMS

We must start by briefly describing the essential characteristics of bureaucratic systems as we see them today.[1] Any *formal organisation*

[1]For a more detailed account *see* H. C. Rieger, "The Mechanics of Bureaucracy: An Essay in Social Cybernetics", *Indian Journal of Public Administration*, Vol. 12, No. 2, April-June, 1966, pp. 175-194.

designed to accomplish large scale administrative tasks by systematically coordinating the work of many individuals is termed a 'bureaucratic system' here, whether the administrative task is governmental, military, ecclesiastical, societal, economic, educational, medical, scientific, private or public in nature. Systematic coordination requires a *hierarchical* pattern of organisation with each position having a clearly defined sphere of responsibility and each lower position being subject to the control of a higher one. An important characteristic of bureaucratic systems is that they are concerned primarily with the *processing of information* that is either generated internally or enters the system from the environments. In this connection, it is convenient to think of the bureaucratic system as being suspended between a 'legislative' system and a 'client' system. Whereas the former formulates the basic goals, specifies procedural strategies for attaining them, and sets the limits of operation of the bureaucratic system, the latter in turn 'controls' the client system. Thus, the board of directors of a business enterprise, the parliament in public administration, and the synod of church are typical legislative systems. The production system of the firm, the public (or well-defined sections thereof) and the congregation of believers can be their client systems respectively. The linkage between bureaucratic systems and their environments is through established channels of communication often calling for the structuring of information inputs in an 'acceptable' way, *e.g.*, acts and ordinances from above, petitions, applications and registrations in prescribed forms from below.

While the bureaucratic system's contact with the environment is through communication channels, internally its functioning can be reduced to communication terms too. While the lowest echelons of the system may be receiving information through-put from the client system (either by reacting to 'disturbances' of the client system in some pre-arranged way or by emitting impulses to the client system according to strategies prescribed to them from above), the next level of the hierarchy will be concerned with controlling the operation of the lower levels by monitoring information through-put (either at the input or the output end) and by making adjustments in the mode of operation by issuing correctives whenever necessary. When the information input from the client system exceeds specified limits, the lower system elements signal upward for operating decisions, and this is familiarly known as 'management by exception'. Similarly, changes in goals or basic strategies prescribed from the higher levels of the hierarchy or received from the legislative system are passed down the hierarchy through the system levels to the lowest echelons.

While the concept of bureaucratic system can be built up from its lowest level which is in contact with a client system by adding successive tiers of units controlling operations on lower levels, it is also possible to

build down from the top by introducing the concepts of *specialisation*, *division of labour*, and *delegation*. An upper level unit may be able to increase the scale (and possibly quality) of its information processing capacity by dividing the work and assigning specialised tasks to units under its control. If these tasks can be further sub-divided, further tiers of operation can be created almost indefinitely. From this example, it is easy to see that bureaucratic systems and sub-systems can also communicate with each other and the environment through echelons higher up or even at the top of the hierarchy.

Important aspects of the information-processing systems thus sketched are the capability to store information regarding past operation, to classify it, especially also with regard to some qualitative criteria of favourableness or unfavourableness, to pair off information outputs with subsequent changes in information input from the environment. Given sufficient variety of such processing equipment, bureaucratic systems and sub-systems conceived in this way are capable of *learning*, and *self-adjustment*.

We will make one distinction here that may be useful if the function of a given bureaucratic system is to control the client system by reacting to disturbances from it through compensatory responses, we will call it a 'stabilising system'. In terms of public administration, such systems are concerned with maintaining *law and order*. Whenever information inputs from the client system are within the operational limits of the lowest echelons of the bureaucratic system, then they are dealt with at that level, and whenever they exceed that range, signals are transmitted upwards requiring an operational decision. In the second case, the function of a given bureaucratic system may be to bring about changes in desired directions in the client system according to goals and sub-goals emitted downwards from the top. In this case, initial impulses requiring action of the lower-level echelons come from the top rather than from the client system. Whereas in stabilising bureaucratic systems, disturbances of the client system are sought to be eliminated by compensatory action, the goal now is to *create* disturbances that may snowball into significant desirable changes of the bureaucratic system's environment. Such systems we will term 'development systems'. It is clear that these two types are unlikely to occur in pure form. Some elements of each of the two systems may be simultaneously present. Their proportions may vary over a period of time when systems change their basic functions. But it is important to recognise the difference, since some generalisations about bureaucratic systems may apply to one of the types and not to the other.[2]

[2]For some conclusions in a developing country, *see* H. C. Rieger, "Bureaucracy and the Implementation of Economic Plans in India", *Indian Journal of Public Administration*, Vol. XIII, No. 1, January-March, 1967, pp. 32-42.

At this stage, we must anticipate a very valid criticism to the rather superficial sketch of bureaucratic systems that we have made. Studies of bureaucracy usually take one of the following two distinct approaches. The first, which goes back to Max Weber's exposition of a formal organisation operating according to standards of rationality for the attainment of specific organisational goals, has been termed the *rational model*. The other approach which is more in vogue today, focuses attention on the people in the system, the informal structures and the individual need fulfilment of the role incumbents within the organisation. This has been termed the *natural system mode*.[3] Here, we have been backward enough to return to the rational model as a starting point. This should not, however, be interpreted as a negation of informal structure and the human element as significant aspects of bureaucracy. We do not wish to infer that bureaucracy *is* a purely rational or mechanical system, but that we are rather looking at this particular aspect of it. It is for this reason also that we have spoken throughout of 'units', 'echelons', etc., of the system, rather than of the bureaucrats filling these positions. From the point of view of the control-system-engineering aspect of the bureaucratic system, it is, in fact, quite possible and common, depending on the level of abstraction, to treat a *group* of individuals, *e.g.*, a 'bureau' as a 'unit' operating under the control of another, in the same way as individuals themselves may be so conceived. Whether appropriate or not, the creation and development of present-day bureaucratic systems is planned according to rationality criteria based on the mechanics sketched here, and the imperfections of human being as elements of bureaucratic machines are generally dealt with only marginally. In consequence, faults of the bureaucratic system as a whole are blamed on 'the system' rather than on the individual bureaucrat. Amongst other authors, both Weber and Wiener have pointed out the mechanical aspects of bureaucratic systems. According to Weber, "The fully developed bureaucratic mechanism compares with other organisations exactly as does the machine with non-mechanical modes of production", and Wiener concludes that "When human atoms are knit into an organisation in which they are used, not in their full right as responsible human beings, but as cogs and levers and rods, it matters little that their raw material is flesh and blood. *What is used as an element in a machine, is in fact an element in the machine.*"[4]

[3]For a good description of both models and an attempt at synthesis. *see* A. W. Gouldner, "Organizational Analysis", in Warren G. Bennis *et al.* (eds.), *The Planning of Change* : *Readings in the Applied Behavioral Sciences*, New York, Holt, 1961, pp. 393-399.

[4]Cf. *From Max Weber*: *Essays in Sociology* (translated and edited by H.H. Gerth and C. Wright Mills), New York, Oxford University Press, 1946, p. 214, and Norbert Wiener, *The Human Use of Human Beings : Cybernetics and Society*, New York, Houghton Mifflin, 1950, p. 254.

SOME IMPLICATIONS OF THE FUTURE

From among the more authoritative predictions of the world in 30 years from now, we may select the picture drawn by Kahn and Wiener.[5] They postulate a basic, long-term multifold trend whose elements seem likely to continue for the next thirty years or so. The elements of this trend are directed towards:

1. Increasingly sensate (empirical, this-worldly, secular, humanistic, pragmatic utilitarian, contractual, epicurean or hedonistic, and the like) cultures;
2. Bourgeois, bureaucratic, 'meritocratic', democratic (and nationalistic) elites;
3. Accumulation of scientific and technological knowledge;
4. Institutionalisation of change, especially research, development, innovation and diffusion;
5. Worldwide industralisation and modernisation;
6. Increasing affluence and (recently) leisure;
7. Population Growth;
8. Urbanisation and (soon) the growth of megalopolises;
9. Decreasing importance of primary and (recently) secondary occupations;
10. Literacy and education;
11. Increasing capability for mass destruction;
12. Increasing tempo of change; and
13. Increasing universality of the multifold trend.

Assuming that this multifold trend actually does continue, what will be the likely implications with regard to bureaucratic systems? The first thing we can be sure of is that they will increase both in size and number. The population increase alone will enhance the tasks of registering, administering, policing and otherwise servicing the population.

On the assumption of constant efficiency of bureaucratic systems made earlier, the number of persons employed in bureaucratic systems will increase at least proportionately to the population increase. Let P = number of population, and B = the number of bureaucratic employees, then

$$b \geqslant p \text{ where } b = \frac{dB}{dt} \text{ , and } p = \frac{dP}{dt}$$

[5]Herman Kahn and Anthony, J. Wiener, *The Year 2000: A Framework for Speculation on the Next Thirty-three Years*, New York, Macmillan, 1967, p. 7.

The likelihood of over-proportionate increases in bureaucracy with increasing populations is given by the diseconomies of scale of bureaucratic systems. With increasing size, the need for internal communication and the liability to error of bureaucratic systems increase over-proportionately. The first phenomenon has been convincingly shown by Parkinson[6] and the second by Morgan.[7] More recently, Peter and Hull have shown that "the larger the hierarchy, the easier is the lateral arabesque", a technique to accommodate redundant personnel[8]. If the population increase results merely in a proliferation of bureaucratic systems rather than in an increase in size of existing ones, it is easy to show that some duplication is likely, which in turn would account for an over-proportionate increase of bureaucratic employment. Whatever the case may be, a decrease of the bureaucratisation ratio $\dfrac{B}{P}$ with increasing population is unlikely unless the efficiency of bureaucratic systems (in terms of information through-put from the environment) increases.

Let us now turn to the following three basic trends connected with the generation and perpetuation of public knowledge: (*i*) the accumulation of scientific and technological knowledge (trend 3); (*ii*) the institutionalisation of change, especially research, development, innovation and diffusion (trend 4); and (*iii*) literacy and education (trend 10). Scientific and technological progress have been achieved in the past through ever finer specialisation, where greater depth is bought at the cost of breadth. This necessitates at the accumulation, documentation and application stages of scientific and technological advances the services of bureaucratically organised systems. Libraries, research journals, and a vast army of so-called research staff, concerned full-time with finding out for the creative few what is known about a given subject, are familiar concomitants of progress in the field of knowledge. The institutionalisation of research in university departments, national laboratories, 'big science' establishments, and R & D organisations, requires administrations to run the institutions. Individual areas of research are limited to those problems that are more or less directly connected with the general end in view, be it the unleashing of atomic energy for wartime or its harnessing for peace-time purposes, the development of habitable stations in space or the planning of economies

[6]C. Northcote Parkinson, *In-Laws and Outlaws*, London, John Murray, 1964, p. 185.

[7]T. Morgan, "The Theory of Error in Centrally Directed Economic Systems", *The Quarterly Journal of Economics*, Vol. 78, August, 1964, pp. 395, *et. seq.*

[8]*See*, Laurence J. Peter and Raymond Hull, *The Peter Principle*, London, Souvenir Press, 1969, p. 39. The tragedy of this and other books like the one by Parkinson is that their superficial humour detracts from the earnestness of their content.

on earth. The image of the scientist as a learned scholar, burning the midnight oil at his desk, before the sombre backdrop of fat books neatly bound in leather has been superseded by that of a white-coated young man in a brightly lit laboratory, working as a member of a team from nine to five. He has a detailed problem assigned to him and a more or less set time limit in which to get it solved, and what is primarily wanted of him are the results on which the progress of his colleagues depends. William Whyte points out that in the United States the overwhelming majority of people engaged in research must work as supervised team players, and only a tiny fraction are in a position to do independent work. "Of the 600,000 people engaged in scientific work, it has been estimated that probably no more than 5,000 are free to pick their own problems."[9] The majority is concerned with the kind of information processing that is characteristic of bureau-cratic organisations. Apart from Whyte, several authors have shown the inhibiting effects institutionalisation of research can have on creativity. Orowan has this to say:

> In the nineteenth century a scientist was generally fruitfully active beyond what is retiring age today... Today an unusually able scientist, figuratively speaking, is on the scrapheap sometimes at the age of thirty or forty; he becomes director of research of a large unit, or head of a large department, a dean, or an important committeeman oscillating between his home town and Washington, D.C. In other words, he is snatched by the social assembly line at an early stage of his career.[10]

The director of the French Atomic Energy Commission, L. Kowarski concludes:

> Patterns of hierarchy, 'family trees' and rigid forms of subordi-nation which have worked well in other fields of cooperation—industrial, military, etc.—may suddenly fail when applied to a situation in which, as so often happens in scientific practice, it can be said literally that nobody knows exactly what he is actually doing or going to do.[11]

[9]William H. Whyte Jr., *The Organization Man*, New York (Pelican Edition), 1956, p. 190.

[10]E. Orowan, "Our Universities and Scientific Creativity", *Bulletin of the Atomic Scientists*, Vol. 15, pp. 237-8.

[11]L. Kowarski, "Psychology and Structure of Large-Scale Physical Research", *Bulletin of the Atomic Scientists*, Vol. 5, p. 187. *See also* the detailed discussion in the last chapter of Robert Presthus, *The Organizational Society: An Analysis and a Theory*, New York, Knopf, 1962, on "The Social Dysfunctions of Organization", from which this and the previous quotations have been taken.

To meet the ever-increasing demands of technological society, more differentiated and complex skill have to be taught, requiring significant expansions of the educational system and the running of specialised training programmes, all of which is likely to have expansive effects on the administrative systems under which they are run. The imparting of literacy and education on a world-wide scale will create a ready stock from which the bureaucratic systems can draw their manpower, and the decreasing (relative) importance of primary and secondary occupations (trend 9) results.

It may be of interest to ask in passing whether the bureaucratisation coefficient in the field of accumulating and disseminating public knowledge is likely to increase or not. Let P_s = the population concerned with science, technology and education; and B_s = the number of bureaucrats employed in the bureaucratic systems concerned primarily with this field. Then it seems reasonable to postulate on the basis of present trends and on the assumption of constant efficiency of bureaucratic systems:

$$\frac{dB_s}{dt} > \frac{dP_s}{dt}$$

1. because of further institutionalisation of research and education;
2. because of bureaucratisation of the academic[12], and
3. because of the further relaxation of manpower constraints on bureaucratic expansion.

Two further trend elements that we may consider next with regard to their implications for bureaucratic systems are world-wide industrialisation and modernisation (trend 5) and urbanisation and the growth of megalopolises (trend 8). There can be no doubt that the growth of bureaucratic systems has followed closely on the heels of industrialisation in the past, and there is no obvious reason why it should not continue to do so in the future. Amongst others, Galbraith has shown how the process of industrialisation and technological advance is attended by the need and the opportunity for the large business organisation as well as by a growing function of the modern State.[13] Moderni-

[12]An interesting exception to the process of academic bureaucratization is what has come to be known in West Germany as "The Second Mossbauer Effect", Mossbauer, a Nobel Laureate in Physics, was prevailed upon to return to Germany from the California Institute of Technology, but he insisted on a reorganization of the traditional German hierarchical Institute set-up. A physics department was set up at Munich, where there are at present ten professors working alongside one another and enjoying equal rights. A small administrative committee minimizes the time of the researchers spent in administrative activities.

[13]John Kenneth Galbraith, *The New Industrial State*, New York, Houghton, 1967, p. 16, *et seq.*

sation is frequently achieved through further specialisation and division of labour, and wherever this occurs, coordinating and controlling agencies are required to organise and gear together the different ongoing processes. Productivity increases are achieved through a greater concentration of human skills in the planning, organising and controlling of production, permitting a reduction of labour input in the actual hardware production process. Put differently, economic and technological progress is accompanied by a shift from blue collar to white collar employment (trend 9).

Durkheim has shown that as societies increase in size, density and urbanisation, the division of labour increases rapidly[14]. In addition, it is not difficult to see that urbanisation *per se* also tends to enhance the necessity of administrative services merely to keep the urban system working smoothly from day to day. Planning, policing, transportation and communication require bureaucratic systems that increase with the density of urbanisation[15]. The increase in size of distribution areas for products and services entails a degree of centralisation and standardisation that in turn necessitates administrative organisation.

Summing up this section, we can note that at least half of the trend elements in the multifold trend are likely to influence the size or the number or the necessity for bureaucratic systems. While the social system grows in size, there is also a shift to greater productive output per man (increase and spread of affluence) with a corresponding increase in complexity of the productive system. There is a shift from direct productive activities to supervisory jobs, from blue collars to white. The growth and proliferation of bureaucratic systems will continue, and this is likely to be over-proportionate unless there are substantial productivity (efficiency) increases in this sphere. Because of Parkinson's Law and the Peter Principle such efficiency increases are unlikely, unless the bureaucratic systems themselves are streamlined. Such restructuring would entail greater complexity and sophistication of bureaucratic systems, which in turn pre-supposes more specialised skills and hence more differentiated training on the part of modern bureaucrats. Unless these efficiency increases are achieved in accordance with the ever more complex requirements of the total productive system, the increase in leisure predicted by the multifold trend may well be nominal only, since everybody will be spending more and more overtime administering everybody else.

[14]Emile Durkheim, *Division of Labor in Society*, New York, Free Press of Glencoe, 1962, quoted in Robert Presthus, *op. cit.*, p. 28.
[15]For an attempt to deal with some of these problems, *see* H. C. Rieger, "The Social Costs of Centralization". Paper presented at the *International Seminar on the Relevance of Gandhi to Our Time*, New Delhi, Jan. 30-Feb. 5, 1970.

MODERNISATION OF BUREAUCRATIC SYSTEMS

It is at this stage that we would like to be in a position to offer panaceas for what seems to be a neglected problem of future development. However, beyond indicating one or two avenues of enquiry, we must capitulate the problem's magnitude and hope that others will contribute thought, imagination and ingenuity towards making some headway in this field.

It is here that the conception of bureaucratic systems as information-processing systems suggested earlier may be a useful approach to the problem. If one stops to imagine a typical bureaucratic system in operation, one will have difficulty in finding a single structural element or ongoing process that cannot be described in information terms. The 'in' and 'out' trays of the standard office cartoons are the receiving and transmitting ends of an information processor operating under the control of another processor higher up the hierarchy. Communication channels are provided by paper flows, telephones, telex equipment and word-of-mouth communication. Information is coded for transmission by typists and stenographers, stored in files, on discs and tapes and in the memories of the human processors, and diffused through duplicators, carbon paper, photostats, printing machines, and conferences. Information is classified in filing systems, catalogues, punch cards, and human minds. Job descriptions are no more than specifications for machine elements, and rules and regulations are the operational controlling devices for such elements. Organisation charts are blueprints for the tying together of machine parts into organic wholes. Just as the input-output table of the economic production system shows the amount of circularity of production required just to maintain the system, so in the bureaucratic system 'productive' information through-put can be distinguished from intra-organisational communication that is required for system maintenance. Efficiency, based on productive information through-put to total information processing, is admittedly incapable of precise measurement, but contemplation suggests that for certain bureaucratic systems currently in existence it may be rather low.

It may be interposed that decision-making is inherent to bureaucratic systems and that it is a basic function incapable of the mechanical operation just described. As one goes up in most of the hierarchies, this may become very valid. But it is equally certain that lower down decisions are often mechanical in the sense that given a set of strategies from which to choose, a set of goals, 'experience' in the form of classified knowledge of the outcomes in a run of previous plays, and an information input from the environment, correct responses can be decided in much the same way as a spark-plug 'decides' to spark at a

given moment.

From the information-processing approach to bureaucratic systems, the direction becomes clear in which efficiency improvements can be conceived. As computers and computer systems become more self-programming, they will increasingly tend to perform activities that amount to 'learning' from experience and training. Such computers will be more efficient than human machine elements, since their operation can be essentially free of the 'noise' which the human processing units are susceptible to, especially with regard to the congruence (or not) of personal and organisational goals. The use of real-time large computers is quite feasible for much of the information and control activity in business and similar organisations, including most trading and financial transactions, the flow of inventories within companies and between suppliers and users, and for instantaneous exchange of money with automated banks and clearing systems. Some more creative fields may look a little less amenable to computerization, but even here the testing of trial configurations in scientific work, as well as the routine work of detailed computation and exposition can be computerised. In engineering, the use of holograms and of computers as experienced pattern-makers, mathematical analysts of optimum design, and sources of catalogues on engineering standards and parts data will reduce the man-power input in the more routine kinds of bureaucratic work. In public administration too, an 'information bank', consisting of a single national information file containing all tax, legal, security, credit, educational, medical, employment and other information about each citizen, with rapid access by the bureaus of public administration can be a boon to a public used to repeating identificational and other data at each step when communicating with the administration. Whereas, in the past, internal efficiency increases of public administration organisations have occurred at the expense of the client system by requiring more and more work and information processing to be done by the client (proformas, documentation, calculations, coding, etc.), greater concern for the system interaction between the bureaucratic and client systems is now becoming essential in order to increase the efficiency of the total system of which these are sub-units.

The automation of bureaucratic systems, in the interests of greater efficiency, is essential if they are not to become important bottlenecks hindering advances in other fields. The process of automation has been and is being applied successfully in many fields of material production systems and further advances are being made day by day. The next step is to apply it to information processing in the addition to matter-processing systems.

Whereas the trends sketched here can be envisaged without great difficulty and have, in fact, been described in greater detail elsewhere[16],

a great deal of detailed research and imaginative planning will be required in the near future to apply them to the bureaucratic systems currently in existence. While, in the field of private business, the forces of competition may help to accelerate the changes necessary for survival, in other realms, many resistances will first have to be overcome. The defence mechanisms and resistances to change in bureaucratic systems are well known.[17] They are understandable concomitants of the individual's need for security. The freeing of the individual from drudgery and routines for more creative work, permitting the 'human use of human beings', is likely to meet the protest of those it will eventually benefit in the same way as in the mechanisation and automation of material production systems. Methods for gradual, yet sufficiently fast, and smooth, yet not too piece-meal, transition will have to be devised.

Some problems remain. The rapid improvement of the instruments at man's disposal for controlling and influencing the environment outpaces the development of goals and goal-systems for whose attainment they are to be used. As we have seen decision-making at lower level is often routine in the sense that, given certain information inputs, it is mechnical. It is, therefore, capable of replacement by mechanisms. Higher up the hierarchy, however, the goals prescribed are less tangible and more vaguely formulated, more often in the idiom 'accomplish A' rather than 'do B'. At the top, the goal culture is more complex and inarticulate still, thus precluding the use of mechanisms currently available. The pressure on top decision-making and decision-taking positions is, therefore, likely to increase still further if man is to retain control over his destiny. It is in this field of social choice—group decision-making—and in the generation of goals and values that some of the most challenging tasks for the future lie. As Wiener has put it, "whether we entrust our decisions to machines of metal, or to those machines of flesh and blood which are bureaus and vast laboratories and armies and corporations, we shall never receive the right answers to our questions unless we ask the right questions."[18]

What we have said in this section about the automation of bureaucratic systems is applicable without difficulty to those types that we have

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[16]*See* Kahn and Wiener, *op. cit.*, pp. 90 *et seq.*, from which some of the above mentioned examples have been taken, and Karl Steinbuch, "Communication in the Year 2000", in Robert Jungk and Johan Galtung (eds.), *Mankind 2000*, London, Allen & Unwin, 1969, pp. 165-170.

[17]*See*, for instance, Dwight Waldo, "Government by Procedure" in Fritz Morstein Marx (ed.), *Elements of Public Administration*, Englewood Cliffs, Prentice-Hall, 1959, pp. 352-370, especially Section 5.

[18]*Cf.* Norbert Wiener, *op. cit.*, p. 254.

identified as 'stabilizing,' *i.e.*, those that react to inputs from the client system in a compensatory (law and order maintaining) manner. Much of what we have said also applies to the development type of administrative system. However, it can be shown that development administrations have some information-processing characteristics that distinguish them in important ways from stabilising systems:[19]

1. Whereas in stablising systems the message from units higher up the hierarchy come as answers to enquiries or as correctives to incorrect operation—at any rate as reactions to the lower unit's information output—in development administrations they come as initial impulses of the 'accomplish A' type rather than the 'do B' variety. This calls for a greater capacity to interpret and act on messages received from above, *i.e.*, greater 'variety', of lower level units.

2. 'Disturbing' the client system will lead to its reacting beyond the narrow range for which lower level bureaucratic units are equipped in stabilising systems. The necessity for communicating upwards becomes more frequent (leading to overwork at the top), unless the lower level units are better equipped than in systems of the stabilising variety.

3. Whereas in stabilising systems record keeping is necessary for purposes of accountability and for the operation of the precedence principle, the very nature of development administration requires the feedback of information to the top regarding successes, failures, and ideas for further procedure. This requires the internalisation of the preference functions of the organisations as a whole or of its upper echelons to a far greater extent than in stabilising systems.

All this obviously makes the mechanisation of development type bureaucratic systems more difficult. Talent, variety and identification with system goals are required not only at the top, but also, and perhaps particularly, at the bottom of the hierarchy. This throws up a whole range of questions regarding the applicability of the status and incentive systems prevalent in present-day bureaucratic systems, where the reward for good work is to be moved up the hierarchy, *away* from the positions where creative skill, imagination and goal dedication are most needed. As Peter and Hull have shown, in conventional hierarchies every employee tends to rise to his level of incompetence, with the result that, other things being equal, every post in time tends to be occupied by an

[19]*Cf.* H.C. Rieger, "Problems of Development Planning in Independent India", *Some Problems of Independent India*, South Asian Studies 4, New Delhi, 1968, p. 10.

employee who is incompetent to carry out his duties.[20] Computers, fortunately, do not require promotion, so that in stabilising systems the problem is not likely to occur to the same degree. In development systems, however, it may well become necessary to devote creative imagination to the design and organisation of bureaucratic systems that do not promote the best people away from their areas of competence.

The challenge lies in the fact that the more development oriented a bureaucratic system becomes the more difficult it is to specify unambiguously the operational characteristics of lower level units. In other words if these units are manned by human beings, their roles in the organisation are incapable of more than vague definition. Reliance is placed on 'personality' rather than on role conformity. If we think of actual behaviour of men in offices as the result of two component dimensions, *i.e.*, on the one hand the role expectations of the position the individual inhabits in the organisation, and on the other the need dispositions of that individual's personality, one can prescribe the relative weight of the components in accordance with organisational requirements[21]. In stabilising systems, the traits of personality required at lower levels of the bureaucracy are restricted, while higher up they are essential. At the top, bureaucratic systems require leadership and creative personalities. It is precisely in this way that development administrations differ. They require a high proportion of the personality components even—or particularly—at the lowest levels of the hierarchy.

Unfortunately or not it is these aspects of human personality that are indispensable, yet irreplaceable by currently available information-processing machinery. □

[20]Laurence J. Peter and Raymond Hull, *op. cit.*, p. 25.
[21]*See* J.W. Getzels, "Administration as a Social Process" in Bennis, *et al.* (eds.), *The Planning of Change, op. cit.*, pp. 377, *et seq.*

The Enlightened Organisation*

Jaideep Singh

THE TWENTIETH century has seen considerable progress in the scientific understanding of the nature of the human being, the dynamics of interpersonal and small group relations, and of that more embracing, more complex phenomena—the large formal organisation. The study of organisations and their management is very great significance to our times since, increasingly, modern societies are being characterised by network of large formal organisations. The happiness and sense of worth of man as producer or man as consumer or man as a spiritual meta-utilitarian being is becoming increasingly dependent on the manner in which these organisations function.

Of the various theoretical models that have been constructed, on the basis of empirical research and experience, I find Professor Rensis Likert's System 4 Participative Group model the most useful for the study and improvement of such organisations. I shall first outline Professor Likert's conception and subsequently portray my conception of the central characteristics of the organisation as it evolves beyond System 4.

THE SYSTEM 4 ORGANISATION

In order to understand this model, let me highlight its five most significant building blocks :

1. The profile of organisational characteristics.
2. Analysis *via* three broad categories of variables, *i.e.*, causal, intervening and end result.
3. The three basic concepts of System 4.
4. The systemic nature of the organisation.
5. The time dimension.

The Profile of Organisational Characteristics

The basis for the model is empirical research using the profile of organisational characteristics form. Managers at various levels, doing

various types of work, were asked to mark on each of about 50 items under 8 main headings, where, in their perception, the most productive organisations lie and where the least productive organisations lie. The eight main headings in the form are :

(1) Leadership Process; (2) Motivational Forces; (3) Communication Process; (4) Interaction-Influence Process; (5) Decision-making Process; (6) Goal Setting; (7) Control Process; (8) Performance Goals and Training.

Each item on the form is to be marked on a continuum from left to right. Thus, to give an example, the first item under the first main heading of 'Leadership' is : "Extent to which superiors have confidence and trust in subordinates." The continuum extends from the left extreme position of "No confidence and trust in subordinates" to the right extreme position of "Complete confidence and trust in all matters". The two intermediate positions are : Have condescending confidence and trust, such as master has to servant" and, "Substantial but not complete confidence and trust ; still wishes to keep control of decision".

These four positions are present on each item. All the first type positions are labelled System I or the Exploitative Authorities Organisation. The organisational system comprising the second type position is called System 2 or the Benevolent Authoritarian Organisation. The third type is called System 3 or the Consultative Organisation and finally, the fourth type is called System 4 or the Participative Group Organisation.

On tabulation of the results, it was discovered that in almost every case, the perception of more or less all the managers for almost all the items was that the most productive organisation would be closer to the System 4 Participative Group type while the least productive organisation would be closer to the System 1 Exploitative Authoritarian type.

Analysis via the Three Basic Categories of Variables, i.e., Causal, Intervening and End Result

The 'causal' variables are defind as the independent variables which can be changed by the organisation and its management and which influence the condition of the organisation and the end result achieved. These are variables like organisation structure, management policies and decisions, leadership principles and behaviour, operating assumptions about human motivation, etc. The intervening variables refer to the state of human resources of the organisation—the attitudes, the motivation, the collective capacity for effective interaction, communication and decision-making. The end result variables are the dependent variables which reflect the achievements of the organisation.

Since the System 4 organisation assumes that all end results are a manifestation of the effectiveness of the interaction-influence system of the human organisation, it pays great attention to the measurement of the causal and intervening variables because it is measures of and trends in these that provide, well in advance, the necessary guidance as to what corrective action and especially, what changes in the causal variables, are required to maintain or further improve the organisation's performance.

The Three Basic Concepts of System 4

(*a*) The Principle of Supportive Relationships.
(*b*) Group Decision Making and Group Methods of Supervision.
(*c*) High Performance Goals.

(*a*) Professor Likert defines the Principle of Supportive Relationship as follows :

The leadership and other process of the organisation must be such as to ensure a maximum probability that in all interaction and in all relationships within the organisation, each member, in the light of his background, values, desires, and expectations, will view the experience as supportive and one which builds and maintains his sense of personal worth and importance.[1]

(*b*) *Vis-a-vis* the second concept, Professor Likert explains that the traditional organisation structures (Systems 1 and 2) do not use a group form of organisation; rather, they use the one-to-one method of interaction, *i.e.*, superior to subordinate at every hierarchical level.

In contrast, the System 4 organisation structure uses, primarily, the technology of group interaction rather than one-to-one interaction.

When the entire organisation is structured into multiple overlapping groups and each group uses the group decision making process skilfully, then the interaction influence system is such that relevant communications flow easily, necessary influence is exerted laterally, upward and downward, and the forces required for coordination and integration of the specialised differentiated units of the organisation are brought into operation.

(*c*) The third basic concept internalised by the System 4 organisation is that of high performance goals.

Every member of the organisation has high performance aspirations and by means of the group interaction process, the precise goals that

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[1]Rensis Likert, *The Human Organization: Its Management and Value*, New York, McGraw Hill, 1967, International Student Edition, Kogakusha Company, Tokyo, p. 47.

are set represent an optimum integration of the needs and desires of the organisation members, the financiers, the customers, the suppliers, others who are interested in the enterprise and members of the citizenry substantively affected by its operations.

The Systemic Nature of the Organisation

It has been observed that there is a very high degree of internal consistency in an organisation. Thus, an organisation that gets a particular rating on any one item on the form is rated similarly on all the other items.

In other words, each system of organisation has a basic integrity of its own. That is. the communication and motivation processes of System 1 are compatible with all other processes of System 1 but are not compatible with any aspect of System 3 or System 4.

This leads to the conclusion that if an organisation wishes to shift its operations from System 1 or 2 to System 3 or 4, it has to change all its operating processes—leadership, motivation, communication, interaction, decision-making, goal setting, control. Also, its organisation structure, methods of compensation, performance appraisal, etc. In other words, everything that anchors the organisation to an inferior system of organisation and management has to be altered. The start can be made *via* the most influential causal variable but systematic plans have to be drawn up to alter in coordinated steps all aspects of the present system—its philosophy, structure, strategies and operating practices.

The Time Dimension

It has been realised that time is an extremely important dimension for appreciation of the model. Thus, for example, the System 1 approach can be used to bring about increased performance as measured by end result variables over a short span of time. However, what is overlooked is that this occurs as a result of the liquidation of the human assets of the organisation, *i.e.*, the condition, the quality of the human organisation. And the effect of the declining intervening variables shows up only in subsequent periods of time.

Similarly, on the upswing, changes in the causal variables toward System 4 require an appreciable period of time before the impact is fully manifest in corresponding improvement in the end result variables. To transform an organisation from System 1 or 2 to System 3 or 4 may take anywhere from one to seven or more years depending on the size and the amount of overall support available.

To conclude this portrayal of Professor Likert's model, I shall use his own words :

The performance and output of any enterprise depend entirely upon

the quality of the human organisation and its capacity to function as a tightly knit, highly motivated, technically competent entity, *i.e.*, as a highly effective interaction-influence system. High productivity, high quality products, high earnings, and successful use of research and development are not accomplished by impersonal equipment or computers. These goals are achieved by human beings. Successful organisations are those making the best use of competent personnel to perform well and efficiently all the tasks required by the enterprise.[2]

THE ENLIGHTENED ORGANISATION

The conception that I shall now present is complementary to everything that has been mentioned so far. In fact, it may be thought of as the initial attempt at portraying the central characteristics of the humanistic organisation that transcends System 4 functioning. We can call this the System 5 organisation or, alternatively, the Enlightened Organisation.

In order to emphasise the unique nature of such an organisation I have created the following terms to identify its key characteristics :

1. Spiritual Mission
2. Unified Intentionality
3. Egalitarian Hierarchy
4. Situational Leadership
5. Harmonious Teams
6. Relational Validation
7. Self-determined Self-Actualisation
8. Entrepreneurial Thrust
9. Dynamic Equilibrium
10. Symphonic Fusion

Let us now study these by turn.

Spiritual Mission

The Enlightened Organisation would be intensely imbued with a sense of spiritual mission. Take the case of a company producing, say, shoes. It would experience itself not merely in the business of manufacturing and selling shoes, but, simultaneously, in the spiritual mission of protecting and taking care of human feet. The degree to which members of the organisation feel themselves involved in a spiritual mission will bring to them the deep psychic experience of living a worthwhile, meaningful life and will be reflected directly in their level of motivation and co-operation. This is so because the deeper biological layers of man, as

[2]Rensis Likert, *op. cit.*, p. 134.

Professor Abraham Maslow has identified in his Theory of the Hierarchy of Human Needs, are Self-Actualisation Being Needs, *i. e.*, the needs for Truth, Goodness, Beauty, Justice, Perfection, Completeness, Unity, Uniqueness, Meaningfulness, etc., and it is precisely these propulsions that we have traditionally called the spiritual thirst of man.

Unified Intentionality

This is a measure of the degree to which every subunit of the organisation, right down to the most basic one, *i.e.*, the individual, is clear on the immediate goals of the organisation and is an integrated contributor to them. Energy that would otherwise be wasted in cross purposes or movement in conflicting directions, towards differing objectives, would now be harnessed and channelised by intentions which all synchronise in achieving the set goals. In other words, the integration between individuals, groups and the organisation that Professor Douglas McGregor has visualised through the application of his Theory Y assumptions about the nature of man would have been brought into practice.

Egalitarian Hierarchy

This quality reflects the dual reality of human beings *vis-a-vis* human organisations. Simultaneously, each person is equal to every other person, yet organisationally, for effective functioning, a reasonably clear hierarchy is also necessary. Thus, the general experience of everyone would be of mutual psychological closeness, of awareness of the basic human dimension of absolute equality as citizen, as person, while accepting voluntarily the requirement of organisational hierarchy as a necessary functional device.

Situational Leadership

Leadership, at every level, would function according to the requirements of the situation. Thus, to give one example of the situational approach, although the participative, democratic style would be used most of the time, there can be occasions when even the authoritarian style would be considered appropriate. What is crucial really is to use the level of psychological evolution as one of the primary criteria for selecting persons to positions of leadership, responsibility and developing their sensitivity and skill in diagnosing and utilising the appropriate type of behaviour which would facilitate best the particular subordinate's or work group's development and contribution.

Harmonious Teams

The organisation would comprise of harmonious teams with each member on each team effectively performing his role and similarly, each team effectively performing its role *vis-a-vis* the other teams with which

it is simultaneously and sequentially related in the work process.

Relational Validation

Elaborating on the Principle of Supportive Relationships, this characteristic takes into account more explicitly the general behavioural science understanding that the bulk, say 80 per cent of human communication, is not in words (though words have their own distinctive infinite power) rather, it is non-verbal. This would mean more awareness of the true intentions of the communicator, the historical continuity and future perspective within which things are said or done, the psychological attitude, the deeds themselves, the facial expressions, the tone of voice, etc. There would be in the relationships dynamic of the Enlightened Organisation a reservior of love, esteem, goodwill and wisdom so that differences and conflicts are accepted as natural and resolved creatively by the far greater reality of forces for mutual cooperation and harmonious production.

Self-Determined Self-Actualisation

It is an important insight of humanistic psychology that the most powerful need of human beings is to express their own uniqueness, to evolve and utilise their special capacities, to rise to higher levels of consciousness and state of being, to experience themselves as free agents, free to make the choices which influence their lives. Knowing this, the organisation would validate the individual as a decision maker, as the ultimate authority *vis-a-vis* his own functioning. It would arrange organisational conditions in such a way as to facilitate individual self-actualisation on the principle that the benefit of individuals in an evolved organisation is synergic with the organisation's interests. It would be vitally aware of the realisation that human beings are using merely 10 per cent or less of their true powers, their unexplored genius, and the use of the unutilised capacities and motivations of man can take organisations to levels of excellence in performance completely undreamt of as yet.

Entrepreneurial Thrust

For mere survival, let alone growth, in today's competitive world, organisations have to develop their power of entrepreneurial thrust. By this expression, I mean some out-of-the-ordinary steps for growth, major jumps as opposed to routine growth at an extraordinary speed. Take for example, the case of Daewoo Industrial Company, outlined by its president Dr. D.C. Kim at the World Management Congress in New Delhi in December 1978. This South Korean company was started a little over ten years ago as a textile exporter and has been growing at the phenomenal rate of about 100 per cent per year. Thus, in 1967, its sales were 580,000 US dollars while in 1978 they had mounted to 2

billion US dollars. In the same time period, the capital investment increased from the small figure of about 10,000 dollars to approximately 92 million dollars. Recently, Daewoo has been listed by *Fortune* Magazine as one of the top 500 international companies in sales volume just after completing the first decade of its history.

Dynamic Equilibrium

This focuses on the reality of perennial change, on the need for stability and continuity amidst change, on change occurring ceaselessly yet the organisation keeping its balance, *i. e.*, maintaining a dynamic equilibrium internally and in its relationship with its environment.

Symphonic Fusion

This refers to the rhythmic orchestration of all the above characteristics into the organisational way of life, into its very being. Thus, the functioning and contribution of the Enlightened Organisation is analogous to the production of a symphony by an orchestra, *i.e.*, it is an experience of consynadic[3] satisfaction for the producers, the consumers and for society in general.   □

[3]Jaideep Singh, "Consynadic Leadership", *Interdiscipline*, Vol. 11, No. 3, 1974, pp. 23-76.

Change Catalyst in Managed Organisational Change*

Garth N. Jones

A NUMBER of various types of helping actors are involved in managed organisational change.[1] Scholars on change have conveniently lumped these actors under a variety of blanket-like terms, such as change agent, development agent, social engineer, social participator, and change catalyst.

While some degree of generalisation and abstraction is necessary to study such a complex subject as managed organisational change and such terms serve these purposes, a strong criticism which can be levied against the scholarship on change is the loose manner in which these terms are sometimes used. Probably, the principal reason for this situation is that the roles of the numerous types of actors in change have not been clearly identified, defined, and understood. Broad generalisations have been convenient way to get around this perplexing problem.

Avoiding the complexity of the problem, however, is not going to bring about a solution. More needs to be known about the actual roles of the principal actors in dynamically changing situations before moving on to the higher abstract levels of analysis.

The purpose of this article is to single out one type of several actors in change and examine in depth his role characteristics. The term used

[1]There is a surprisingly large number of various types of professional helping agents, disregarding the non-professional-types, whose numbers are still increasing. Some typical examples may be useful to indicate the complexity and the magnitude of the problem. For personality systems are found such specialists as the psychiatrist, the clinical psychologist, the social worker, the marriage counsellor, and the parent educator; for the group systems the staff consultants, the leadership trainers, and the conference experts; for the organisational (institutional) systems the productivity analysts, the communication experts, and the labour-management consultants; and for the community systems the public relations expert, the community self-survey consultants, and the industrial development planners.

to designate this type of actor is change catalyst.[2]

In examining the role of the change catalyst, it will be necessary to give the context of the situation within which he functions. The first step in this direction will be the development of working definitions of the principal actors involved in change, which are: the client system, the change agent and the change catalyst. Next will be the presentation of a conceptual framework, if not a model, wherein the dynamic relationships of these three agents, with special attention on the change catalyst, will be investigated. After this, the concepts of the model will be examined against statistical and empirical data drawn from cases on managed organisational change.

The research approach of this article is largely empirical. Nearly two hundred cases on managed change have been analysed by the technique of content analysis against a scheme of analysis which includes a large number of variables. The objective has been to identify, define, and categorise properties of managed organisational change, and to indicate their place and usefulness in the change processes.[3]

DEFINITIONS OF THE PRINCIPAL ACTORS IN CHANGE

All situations of managed organisational change must include at least the two actors : A client system and a change agent who are present throughout the change processes.[4] Because of their essentiality

[2]Several writers on change have alluded to the importance of the role of the change catalyst. Floyd C. Mann and Franklen W. Neff, in an evaluation of two seminars held for high level executives in 1959 at Ann Arbor, Michigan, said that the role of a change catalyst was unanticipated in the discussions of three cases on change and that they regarded this product as the ''dim but intriguing vision of a new role in the social engineering of change''. *See Managing Changes in Organisations,* Ann Arbor Michigan, The Foundations for Research on Human Behaviour, 1961, p. 53.

For several other useful studies that give some insights into the role and the change catalyst, *see* Richard Waverly Poston, *Small Town Renaissance,* New York, Harper, 1950; Charles F. Carnell, Fred G. Wale and Stephen B. Withey (eds.), ''Community Change: An Action Program in Puerto Rico'', *The Journal of Social Issues,* 9 (Quarterly, 1963); Margaret Hass Wormser, ''The Northtown Self-Survey: A Case Study'', *The Journal of Social Issues,* 5 (Spring, 1949), pp. 5-20; Alfred J. Marrow and John R. P. French. Jr., ''Changing a Stereotype in Industry'', *Journal of Social Issues,* (1945), pp. 33-47, and Lester Coch and John R. P. French, Jr., ''Overcoming Resistance to Change'', *Human Relations,* 8 August, 1948, pp. 512-32.

[3]*See* Garth N. Jones, *Planned Organisational Change: A Set of Working Documents,* Los Angeles. Centre for the Study of Public Organisation, School of Public Administration, University of Southern California, 1964 (mimeographed). How this data has been used in this article, *see* the Annexure.

[4]These two terms were derived from Ronald Lippitt, Jeanne Watsom and Bruce Westley, *The Dynamics of Planned Change,* New York, Harcourt, Brace, 1958, especially as found in chapter one.

they could be called the primary actors in change. Other types of actors may also at times be present. Such actors could be called secondary actors. A change catalyst is one of these types of actors.

While all three of these actors are 'behaviour units'[5] they differ substantially in their nature, character, and complexity. To simplify the task of developing workable definitions for each of these actors, it is probably best to begin by defining change agent, then client system, and finally change catalyst.

Change Agent

A change agent functions as an agent (helper, doer, mover) employed by the client system to assist in improving its organisational performance. This agent may take several forms: that of a person, a group or an organisation. The distinguishing feature is that it is a 'behaviour unit'; some aggregate that is capable of assuming different positions while retaining a common identity or boundary.

(Continued from previous page)

Several terms have been employed to discuss change in organisational settings. The more common terms are "directed social change", "planned change", "planned organisational change", "controlled change", "developmental change", and "managed organisational change". While there may be shades of differences in meaning, they all pertain to the basic notion that change can be planned and managed in a systematic manner. Some leading references within these dimensions follow. For two bibliographies *see* Garth N. Jones and Robert Giordano, *Planned Organisational Changes. A Working Bibliography*, Chicago, Comparative Administration Group of the American Society for Public Administration, 1964 (mimeographed), and, Shaukat Ali and Garth N. Jones, *Planning, Development and Change: An Annotated Bibliography on Developmental Administration*, Lahore, University of Punjab Press, 1966. For specific references *see* Eli Ginzberg and Ewing W. Reilly, *Effecting Changes in Large Organisations*, New York, Columbia University Press, 1957; Warren G. Bennis, Kenneth D. Beene and Robert Chin (eds.), *The Planning of Change*, New York, Holt, Rinehart and Winston, 1961; Paul L. Lawrence, *The Changing of Organisation Behaviour Patterns*, Boston, Harvard University Graduate School of Business Administration, 1958; Harriet O. Ronden and Paul R. Lawrence, *Administrative Changes*, Boston, Harvard University Graduate School of Business Administration, 1956; Tom Burns and G. M. Staker, *The Management of Innovation*, London, Tavistock Publications, 1961; Charles R. Walker, *Toward the Automatic Factory*, New Haven, Yale University Press, 1957; Robert Tannebaum, *The Introduction of Change in Industrial Organisations: Improving Managerial Performance*, New York, American Management Association, Inc., General Management, Series No. 186, 1957, and H. G. Bennet, *Innovation, the Basis of Cultural Change*, New York, McGraw-Hill, 1953; Warren Hunt Goodnough, *Cooperation Change*, New York, Russell Sage Foundation, 1963; Warren H. Bennis, "A New Role for Behavioural Sciences: Effecting Organisational Change", *Administrative Science Quarterly*, 8 (September, 1963), pp. 125-126; Paul Spencer and Cyril Sofer, "Organisational Change and its Management", *The Journal of Management Studies*, 1 (March, 1964), pp. 26-47; and Cyril Sofer, "The Assessment of Organisational Change", *The Journal of Management Studies*, 1 (September, 1964), pp. 128-142.

[5]The definition of change agent explains what is meant by this term.

The concept of change agent also includes the property of professionalism. By this is meant that the agent is equipped with the skills and techniques required to improve the performance of the client system.[6]

The literature on change suggests the change agents, in various degree of relevance, may be involved in three fundamental aspects of managed organisational change. *First,* they attempt to identify and clarify the goals of change for the client systems. *Second,* they develop useful strategies and tactics to help the client systems solve their own problems. *Third,* they establish and maintain appropriate working relationships between the parties engaged in the change.[7]

Client System

The term client system refers to a specific social system that requests a change agent to assist in altering its organisation with the objective of improved performance. Social systems are considered as systems of relative permanent social interactions (relationships) that involve two or more persons, groups, organisations, communities or any combination thereof.[8]

Furthermore, each social system is regarded as a closed or concrete system.[9] By this, it is meant that each social system may be helped without affecting other related higher and/or lower systems. The magnitude of the planned change determines whether or not only one or two or more related social systems must be altered in order to achieve improved organisational performance (successful change).

[6]In the change process, non-professional agents may be involved. Within the concept of managed organisational change as advanced in this article, these agents are foreseen and built into the change processes as strategies and tactics.

[7]Lippitt and others, *The Dynamics of Planned Change . . . ,* in chapter five give a breakdown of the typical activities of change agents.

[8]In more specific terms, the properties of any social system, using Parsonian theory are: (1) two or more actors occupying differentiated statuses or positions and performing differentiated roles; (2) some organised pattern governing the relationships of members and describing their rights and obligations with respect to each other; (3) some set of common norms and values, together with shared cultural objects and symbols; (4) system boundary—maintaining tendencies (*i.e.,* there tends to be more integrated organisation among the components of the systems while it is operating than there is between these components and elements outside the system); and (5) a built-in-tendency toward system stability or equilibrium. For more details *see* Edward C. Devereux, Jr., "Parsons Sociological Theory", in Max Black (ed.), *The Social Theories of Talcott Parsons,* Englewood Cliffs, N. J., Prentice-Hall, Inc., 1961, pp. 26-27.

[9]The totality of managed organisational change could be conceived within the analogy of the organisation of the universe with its full complement of galaxies, solar systems and individual plants as advanced by John. M. Pfiffner and Frank P. Sherwood, *Administrative Organisation,* Englewood Cliffs N. J., Prentice-Hall, Inc. 1960, p. 33. Each one of these is a concrete system with considerable latitude of moving and changing at its own rate. Usually, the larger systems, for example, a solar system. In the former system change is almost imperceptible; yet this system profoundly affects its lower order systems.

Change Catalyst

The concept of a change catalyst in managed organisational change is roughly analogous to that of a catalyst in chemical reactions. A change catalyst is any agent that causes, speeds up or slows down change (catalyst) in an organisational system. In this process, the agent undergoes no permanent change. A small input of his catalytic influence has significant and widespread effect in an organisational system, and this is one of his conspicuous properties. Furthermore, the influence is that of the change catalyst and not that of some other actor.[10]

A change catalyst need not be present in all stages of change. However, in order to be classified as a change catalyst, his presence must be foreseen and known throughout the change processes. If not, he fits within another category of change actors.

Like a chemical reaction, sometimes the reason for the influence of the change catalyst is not clear, just his presence initiates catalysis. While this matter will subsequently be examined in greater depth, a few characteristics of the catalytic role could profitably be noted here.

Sometimes the role of a change catalyst only appears to be that of bringing together the agent of change and the client system. Under other circumstances, this actor appears to be a meaningful facilitative force. Often, he appears to become part of the change agent or the client system. This cannot occur since by definition he must remain as an independent agent throughout the change process. In short, his role is multi-dimensional and characterised by free movement: joining at one time the influence pattern of the change agent and at another time that of the client system.

CONCEPTUAL FRAMEWORK[11]

Basic Assumption

Managed organisational change rests upon the basic assumption that change in organisations may be planned and controlled in a systematic manner. In other words, the behaviour of people can be changed and/or integrated in such fashions by the skilful employment of social science and technology so that an organisation becomes more

[10]The change catalyst power (influence) may be derived from his organisational offices, personal characteristics, or both. The critical aspect is that it is clearly understood that his influence flows from him and not from some other actor. Within these terms a suggested reference is Amitai Etzioni, *A Comparative Analysis of Complex Organisation*, New York, The Free Press of Glencoe, Inc., 1961, especially chapter five, Compliance and Organisational Elites.

[11]This framework leans heavily upon my recent research and writings. For a more comprehensive treatment *see* particularly my *Planned Organisational Change; A Set of Working Documents...*

effective in utilising its energies and resources for goal attainment.[12]

Fundamental Concept

Building further upon this basic assumption, the fundamental concept of managed organisational change for the principal actors concerned represents conscious, deliberate, and collaborative efforts toward specific goal achievement. Such change is developed for a programme of study, action and accomplishment, and not just for a specious description of events and circumstances. Involved in the action process of change, among several considerations, are mutual goal setting, some types of power relationships, and rational planning and administration action.

Within the terms of this article, organisational change brought about by the extreme means of terror, violence, force and the like is not considered. Certainly, organisational change can be wrought by such means but this constitutes another subject.

Furthermore, this article does not cover natural organisational change : a situation where there prevailed no apparent consciousness, deliberativeness, and goal setting in the process of change.

The final objective sought by managed organisational change is *a new state of equilibrium for the proper functioning of the organisational system.* In simple terms, all of the significant components (behaviour units) of the organisational system are in support of each other. For illustration, the individual in the organisation is more able to find phychological security because of the absence and/or reconciliation of conflicting values, beliefs, and attitudes. The same applies for the other components of the organisation.[13] In mechanical language, all of the significant components in the organisational (social) system are in a state of adjustment.[14]

Components of the Conceptual Framework

Goals of Change : Organisations are goal seeking social units. Their

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[12]Organisation means here any of the larger social systems which have a more or less clearly defined and specialised functions requiring loyalty and labour of a group of people who are organised in a systematic relationship and whose efforts are coordinated by some kind of leadership factor. This includes such organisations as business enterprises, welfare agencies, political parties, educational institutions, and well integrated communities.

[13]For further elaboration, in addition to the literature earlier referenced, *see* Garth N. Jones and Aslam Niaz, "Strategies and Tactics of Planned Organisational Changes: A Scheme of Working Concepts", *Philippine Journal of Public Administration*, 7 October, 1963, pp. 275-85; and Mohammad Aslam Niaz, "Strategies of Planned Organisational Change" (unpublished doctoral dissertation, School of Public Administration, Los Angeles, University of Southern California, 1963).

[14]The concept of social equilibrium as used in this article is along the lines put forth by Kenneth E. Boulding, *Conflict and Defence: A General Theory*, New York, Harper Torchbooks, 1963, particularly in chapters one and two.

very *raison d' etre* is the service or achievement of goals. However, not all goals of organisations fit within the dimensions of managed change. To explain what is meant by this component it may be useful to restate the topic as the planning and the implementation of change(s) in organisational systems. The final purpose of such changes, as previously noted, is improved organisational performance.

Goals of change, therefore, are predetermined states of affairs with the purpose of improved organisational performance with a client system is striving to realise. Once such a goal is accomplished, it becomes part of client system, and, hence, ceases to be a goal.

Strategies and Tactics in Change : Strategies here refer to the planning and the direction of operations ; while tactics relate to the manoeuvring of forces into positions of advantage. Both aspects involve manipulation and should be treated somewhat together.

Manipulation is the substitution of judgement in such a manner that those being influenced are not aware that it is occurring. Although this process may be known later, it is not known while the manipulation is taking place.

Structuring of Change : Managed organisational change requires that the processes of change be structured in a planned and systematic way. In a broad sense, three processes may be conceived : (1) the initiation of change, (2) the regulation of change, and (3) the cessation of change.

The totality of managed organisational change is somewhat anologous to that of placing a man into orbit. The primary problem is to link the feeble organised forces under the control of man into those of his natural environment. If this is accomplised, the object (man) is successfully placed into orbit and maintains this position largely because of natural forces and not because of the organised and the controlled forces of man.

The entire process of placing an object in and out of orbit may, therefore, be visualised as the skilful application of leverage and linkage. The same model applies equally so within the conceptual framework of managed organisational changes as advanced in this article.

Within this frame of reference, structuring becomes a kind of a 'grand strategy', save that it embraces the totality of the change processes.

In sum, structuring of change pertains to planning, selecting, and applying of strategies and tactics in relationship to points of linkage and leverage into higher and/or lower order organisational systems. Involved in even a broader sense is the overall 'grand strategy' pertaining to the three stages of managed organisational change : initiation, regulation, and cessation.

Actor Roles : Change in even relatively simple social systems demands a large number of actor roles. The concept of actor roles is

derived from a recent work by Robert Kahn and associates. Organisations are treated as open, dynamic, social systems with the key reference point called an office. "Associated with each office is a set of *activities*, which are defined as potential behaviours. These activities constitute the *role* to be performed..." by any behaviour unit "who occupied that office"[15]

Again it should be noted that what are the significant actor roles is probably the weakest area of the scholarship on managed organisational change. Little is known even about the nature and character of the principal actor roles, let alone the numerous minor ones. To give some indication of what is meant on this point, it is probably useful to compare some of the significant differences between the actor roles of the change agent and the change catalyst.

Role Comparison of the Change Agent and the Change Catalyst: A change catalyst has only the properties to cause, speed up or slow down the process of change. This agent cannot modify the position of the final equilibrium in a true equilibrium situation, but can only cause or hasten movement toward this position. Only, the change agent and/or the client system have the property to facilitate the establishment of a new position of equilibrium.

In the change process, the change catalyst by definition undergoes no permanent modifications in his character as a type of behaviour unit : whereas the change agent may, and usually does, change his character. For illustration, the change agent may be an individual in the initiation stage of change and end up as an organisational unit in the cesssation stage.[16] If the change catalyst starts as an individual in the change situation, at the conclusion of the change he still retains this character.

Throughout the change process, the change catalyst remains as an independent and identifiable actor. He never becomes part of another type of agent in the change. This is not the situation for a change agent who may eventually end up as part of a client system. A good example is a management consultant who joins a business firm which he has served.

The influence exercised by the change catalyst is directly associated with him as an actor in the change process. This is not always the case with the change agent. Frequently, the change agent by himself is not an influential actor. His influence for change may, and usually does, come from linking up with more influential (facilitative) forces in and/or out-

[15]Robert L. Kahn, Donald M. Wolfe, Robert P. Quinn, J. Diedrick Snock, and Robert A. Rosenthal, *Organisational Stress: Studies in Role Conflict and Ambiguity*, New York, John Wiley, 1964, p. 13.

[16]For more details on this matter *see* my "Preventive Medicine at Work: A Hypothetical Case of Managed Organisational Change", *Philippine Journal of Public Administration*, 8, Summer, 1965, pp. 241-55.

side of the organisation.

The influence of a change catalyst is often of an explosive nature and requires careful management control. The opposite generally characterises the influence of the change agent. Explosive change is not usually the type which the change agent is interested in creating even if he had the ability to do so.

In the change process, the change catalyst may be present at one stage but not at another. By definition, the change agent must always be present throughout the process of change and terminate his relationship with the client system upon the cessation of change. The change catalyst may continue as an entity within the organisation after the cessation of change.

A change agent is always a professional; whereas a change catalyst may or may not be a professional agent.

To sum up the principal subject of the article to this point and to project future discussion, paternalism is the predominant characteristic of a change catalyst. In other words, a change catalyst is always a paternalistic actor. As such, his influence is pervasive and subtle throughout the client system. He is not necessarily involved in the venture for personal gain, but rather has an altruistic interest. While he may have at his disposal considerable coercive and utilitarian power, he prefers to rely principally upon normative compliance relationships.[17]

As stated before, his role in change is to function as a facilitator. To accomplish this function, he employs a variety of approaches, such as bringing together the right people at the right time, offering acceptable and constructive suggestions which are considered to be based upon wisdom and experience, skilfully involving when necessary third parties who break down resistances and stimulate action, and providing proper and suitable facilities in which action can take place.

In final note, the behaviour model of change catalysts is that of helpful, constructive, sensitive, rational and dynamic paternalism. His influence relationships in change are benign and constructive. He is generally a local and not a cosmopolitan in outlook.[18]

In contrast, the behaviour model of change agents is one of hard hitting and competent professionalism. His influence relationships are

[17]The three types of compliance relationships as used in this article are the same as discussed in Etzioni, *A Comparative Analysis of Complex Organisations*, ..., especially pp. 1-70.

[18]The terms local and cosmopolitan are used essentially in the sense as advanced by Robert K. Merton, *Social Theory and Social Structures*, New York, The Free Press of Glancoe, 1957, p. 387, *et seq.* For an application of this model *see* Alvin W. Gouldner, "Cosmopolitans and Locals : How People View their Role in the Organisation", *Administrative Science Quarterly*, 2, December, 1957, pp. 282-92.

frequently associated within the dynamic and energetic factors in the client system and often is only of a superficial nature. Change agents are first and above all professionals and take on a cosmopolitan outlook.

ROLE OF THE CHANGE CATALYST: EMPIRICAL EVIDENCES

The point has now been reached where it would be useful to present empirical evidences as to the actor role of a change catalyst. To facilitate this examination, a model of the relative power positions of the primary actors in managed organisational change is suggested.

Power Positions According to the Concept of Managed Change

From the outset, it should be observed that the presence of a change catalyst greatly complicates the change situation. Where no change catalyst is present, the change process consists of analysing the power (influence) relationships between only two parties: a change agent and a client system. Furthermore, the concept of managed organisational change requires that the change relationship between these two parties shall be fairly equal, *i.e.*, there are no extreme power imbalances.

This point is illustrated in Fig. 1. The power relations between the change agent and the client system constantly oscillate throughout the change processes, but never to any great extremes. Where the two lines join, this signifies a situation of equal power balance.[19]

A change situation of this nature is, indeed, very rare. Such a concept serves only as a frame of reference and an ideal to strive for in the change processes.

When a third party, a change catalyst, is involved, it becomes difficult to diagram the change relations. A change catalyst does not have the capacity to bring about the change independently. To repeat, he only has the capacity to initiate, speed up or slow down the change processes.

The change catalyst is purely a facilitator. He carried out this role by changing the power balances between the change agent and the client system. Under one set of circumstances he joins the power position of the change agent and under another the client system. Throughout the change processes he constantly switches his own power position in order to facilitate the sought for change.

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[19]Influence is a direct result of interaction between behaviour units. The greater the interaction, the more influence is generated. This aspect could be reflected by expanding the arcs on the chart. However, since this dimension is not a primary concern of this study, it was decided to prepare the Figures to show only the relative power positions between the parties involved in the change.
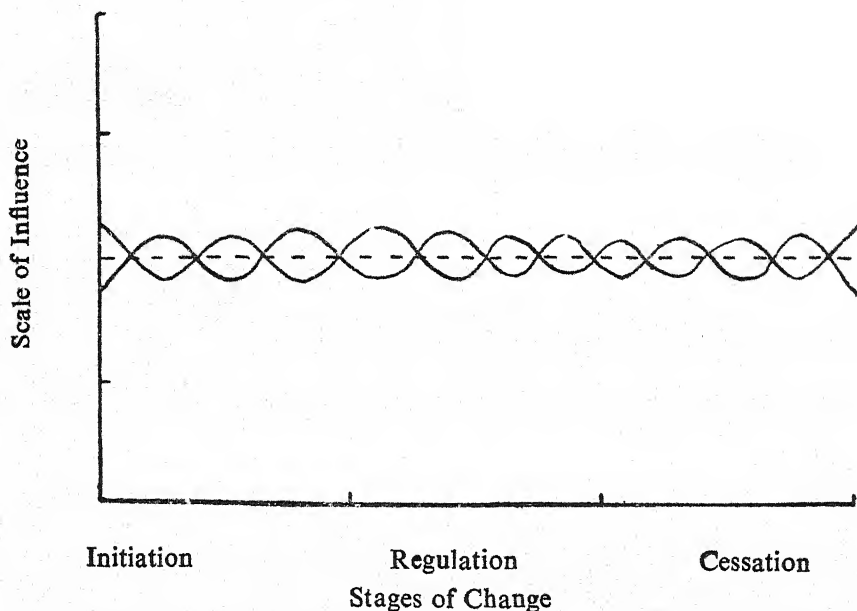
FIG. 1. Balance of Influence According to the Definition of Managed Organisational Change

In this sense, the change catalyst is analogous to a father trying to keep a seesaw going up and down smoothly with two children having different weights at each end of the board. He switches his own weight (influence) from one side of the fulcrum to the other in a constant fashion in order to keep the seesaw going up and down in some regular and smooth manner.

His action of changing his influence position keeps the system in a state of movement and this movement works toward goal achievement. In this illustration, the goal is to keep the seesaw operating effectively for the maximum satisfaction of the two children. Without his assistance, this could not be possible.

The question to be asked is whether or not his action changed the organisational system? The answer is no. He added nothing of a permanent nature. If he had added additional weights to one end of the board in order to balance the seesaw, then this would have changed the organisational system. This would have been a technical modification in the structure of the system. By this action he would have become a change agent instead of a change catalyst.

Empirical Evidences as to Influence Patterns

The subject or influence patterns will be examined under two sets

of circumstances. First, where only two empirical actors are present, a change agent and a client system, and secondly, where three principal actors are present, a change agent, a client system, and a change catalyst.

Two Principal Actors in Change: Fig. 2 depicts the general pattern of influence when no change catalyst is present.

$$N = 136 \qquad N = 135 \qquad N = 16$$
$$X = 3.30 \qquad X = 2.84 \qquad X = 1.92$$
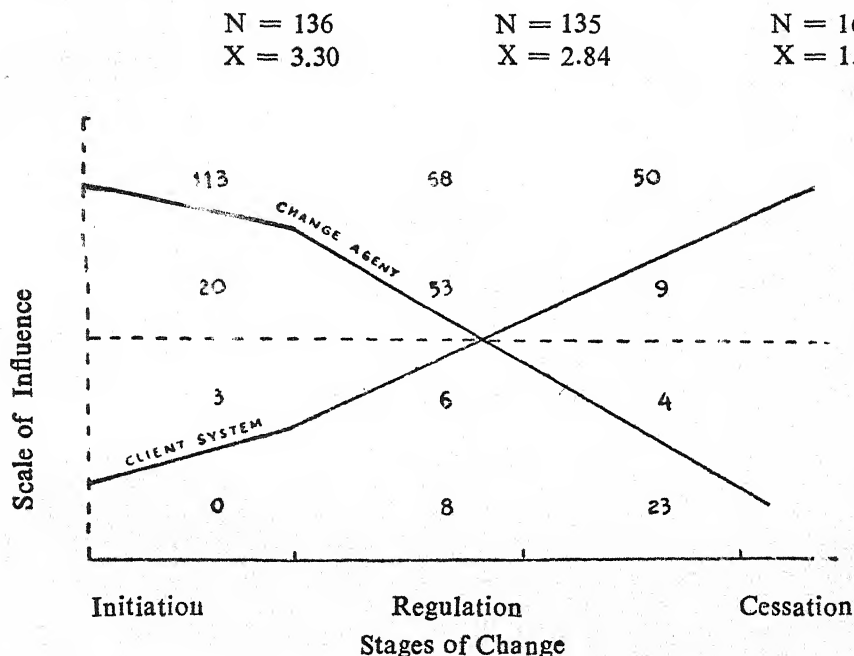
FIG. 2. Pattern of Change Agent Influence in All Types of Organisations When No Change Catalyst Present*

* The case population was 136.

Probably the most revealing feature in Fig. 2 is the dominating influence position of the change agent in the initial phase of change. Out of 136 cases analysed, 113 placed the change agents' influence position some where in the fourth quartile with a weighted average of 3.30 of the total influence. While the influence of the change agent rapidly declines, with a weighted average of 2.84 in the first phase of the regulation stage and 1.92 in the first phase of the cessation stage, the interesting aspect to note is that throughout the entire process of change the change agent exercises a strong influence role.

It can hardly be extrapolated from the available statistical data and a general reading of the cases that the increasing influence of the client system is usually more a result of a declining level of actor interaction

than anything else. In other words, after the change has been initiated, the change agent quietly and purposively slows down the tempo of actor interaction with the consequence that the client system almost gravitates into the position of control. This reasoning logically fits within the theoretical construct of the structuring of change in an environment of dynamic system relationships with its distinguishing feature of system leverage and linkage.

Three Principal Actors in Change: Fig. 3 illustrates the influence patterns in change when three principal actors are present.

Initiation	Regulation	Cessation
	Stages of Change	
45% CA	50% CA	40% CA
30% CS	35% CS	50% CS
25% CC	15% CC	10% CC
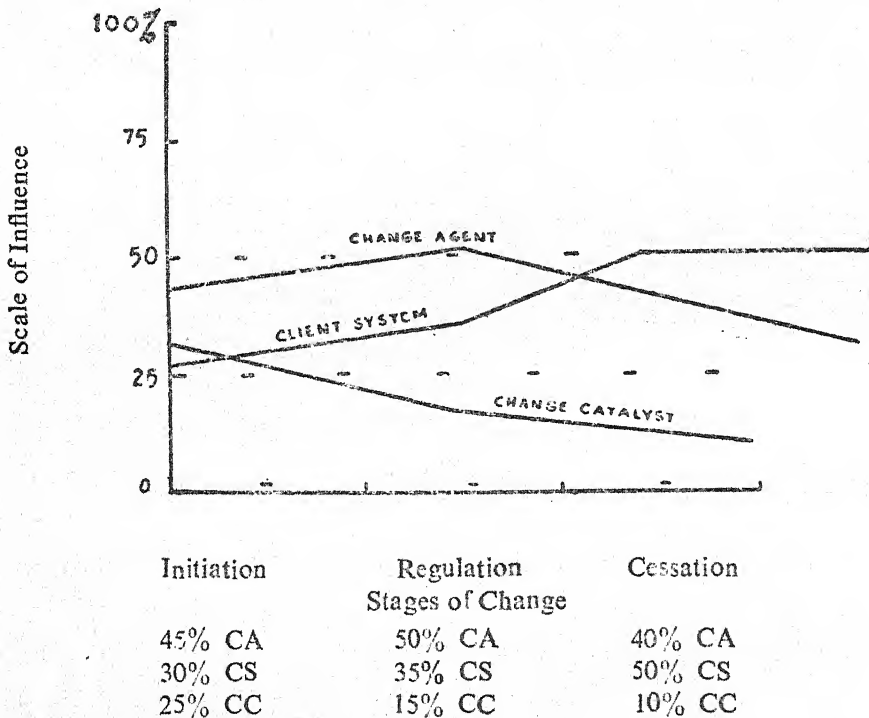
Fig. 3. Influence Patterns when Change Catalyst Present*

*Adapted from data found in the appendix.

The influence of the change catalyst is greatest in the initiation stage and constitutes in the neighbourhood of 25 per cent of the total influence. As the change moves on, the influence of the change catalyst rapidly declines.

The trend for the client system is exactly opposite. The influence rapidly increases until it secures a dominating position in the early phase of the last stage.

The change agent starts with a high influence level and increases further his position during the regulation stage. His influence rapidly declines during the later phase of the regulation stage and during the entire stage of cessation.

By the middle of the cessation stage, the client system dominates the change situation by controlling 50 per cent or more of the influence. In short, he is in control of his own organisation. The goal has been achieved, and there is no more need for the change agent or the change catalyst.

It can easily be observed that during the first two stages of change, the power balance is decidedly in favour of the change agent. Furthermore, most of the cases in this study reveal that the change catalyst usually supports the change agent in the first two change stages which further increases his power position. Thus, a strong power imbalance in favour of change immediately commences once the change action is initiated.

Case Examples of Change Catalyst in Action

The previous discussion was drawn from a large number of case studies and as a consequence was highly general and abstract. Further insight may be assigned by examining individual cases where change catalysts were deemed present.

In order to point out leading properties of change catalysts in action, three points of reference are used : (1) characteristics of change catalysts, (2) influence pattern of change catalysts, and (3) activities of change catalysts. Since no single case adequately covers all of the properties noted under these headings, several cases have been selected. However, sometimes a case although discussed only under one topical heading, includes features that belong to one or both of the other headings. These headings are regarded only as convenient reference point and not absolute categories for classification.

Characteristics of Change Catalysts: The leading behaviour characteristics of change of catalysts have been advanced as non-professional, altruistic, and local in outlook. A case which well illustrates these characteristics takes place in a conservative rural region in the Netherlands.[20] In the spring regional Catholic Charities in the Deanery of Thorn, Province of Limburg, for a social work survey and a long range plan for the development of social services in this rural region.

[20]William, A.C. Zwanikhan, "Planned Change in a Netherlandic Rural Region", *Adult Education*, 12, August 1961, pp. 19-28. It should also be noted that this case was purposively undertaken within the construct of planned change as developed by Lippitt, Watson, and Westley, *The Dynamics of Planned Change . . .*, which is a rare finding.

The regional Catholic Charities (Agency) was the only social work institution in this nearly 100 per cent Catholic region. It served an area of eighty-four square miles with 13,500 inhabitants living in thirteen scattered villages and neighbourhoods.

The representatives of the academy convinced the executive board of the agency that a broader approach than survey and planning was desirable, and that it might be important to involve the antagonistic communities in a self-analysis and self-planning procedure to get things started. To have real support at the grassroots in this rather rigid society, it was believed necessary to involve the local leaders of all possible sub-groups.

The assumption was accepted by the executive body of the Agency, and the project within these terms was initiated.

Early in this case the three principal parties to change emerge. The Catholic Charities (Agency) clearly becomes the change catalyst. The Agency does not have the professional 'know-how' to improve the well-being of the client system, the community, and it has sought the assistance of a professional change agent, the Social Academy. The interest of the agency was solely altruistic and local in outlook. This agent had only a paternalistic concern in somehow improving the well-being of the community of which it was a member.

In contrast, the representatives of the academy were scholars of repute and well versed in the theory and dynamics of managed or planned change. They were cosmopolitan in outlook and in accepting the change assignment immediately had a vested and professional interest in the success of the undertaking.

This aspect becomes a little clearer with the following facts of the case which also touch upon other facets of the role of the change catalyst.

The project for community self-analysis and self-planning was guided by two staff members of the academy : an adult educator and a social scientist. Directly involved in the project implementation were four social work students, two young ladies and two young men, and one staff member of the academy, a lady social worker.

All of these persons operated out of the Catholic Charities Agency and can be regarded as a group operating as the change agent.

An early position was taken between the change agent and the change catalyst that the ultimate responsibility as to what happened in the region rested with the Agency (change catalyst). While this may appear to have placed the change catalyst in an undue power position, this was not revealed anywhere in the case. The change agent was given wide latitude to carry out successfully his activities. The change catalyst operated primarily as a facilitator, becoming involved in such activities as organising discussion groups, providing facilities and rendering staff

assistance. In sum, he provided full support to the venture, and thereby made a substantial contribution to the successful conclusion of change in a rather difficult client sysytem.

Influence Pattern of Change Catalysts: The influence pattern of a change catalyst is pervasive, not only extending throughout his client system but also frequently on to the broader limits of his operational environment. The case just discussed indicates this type of influence pattern.

Because of this type of influence pattern, change catalysts are frequently endogenous actors which partly account for this widespread influence. Such actors are usually in a more favourable position to exercise normative influence and secure receptive audiences than exogenous actors who are usually not as well acquainted with the nuances and dynamics of the client system. In simple terms, the difference is between that of an 'insider' and an 'outsider'. Change catalysts are usually 'insiders'.

Some may question that the following case does not fully measure up to the behaviour model of a chang catalyst. However, the case illustrates well the pervasive influence which such types of actors tend to enjoy, particularly as a consequence of being 'insiders'.

The staff psychiatrists of the United States Veterans Administration Hospital believed that psychiatric patients should wear their own clothing throughaut their stay in the hospital.[21] The current practice of the hospital was to issue immediately upon admission complete and standard hospital wearing apparel.

The Chief of the Psychiatric Service conveyed to the Director of the Professional Services the staff's wish to make the change within a reasonable period of time. The Directors of the Professional Services took the attitude that if the Chief of the Psychiatric Service recommended the change as 'medical policy', he would support it was policy and assume the task of implementing the change.

The staff psychiatrists, although highly trained professionals, cannot be regarded as the change agent since they only recommended the change. The therapeutic value of the change, which fits within their competency, is not the issue. The issue it how to carry out the change which is now considered policy. This is the primary responsibility of the Director of Professional Services, and, hence he becomes, the change agent.

Resistance to the change was widespread, coming from both the patients and the administrative and professional hospital staffs. To break

[21]This case abstract has been drawn from Paul C. Agnew and Francis L.K. Hsu, ''Introducing Change in a Dental Hospital'', *Human Organisation*, 19, Winter, 1960, pp. 195-98.

down this resistance, the Director of Professional Services held a series of six conferences in which the resistance to the proposed change steadily declined because the individuals involved gradually internalised, at least in part, the proposed change.

Behind all of these conferences the staff psychiatrists quietly operated and responded as they might to resistances in psychotherapy. They avoided frontal attacks, such as becoming involved in angry or defensive discussions. Instead they encourged expression of feelings and concentrated upon offering in a calm way, detailed ways how to implement the proposed change and the values to be gained.

In sum, while not in the primary change role, the staff psychiatrists exercised pervasive and constructive influence and their efforts substantially contributed to achieving the goal in a satisfactory manner. The influence exerted was solely normative and in a free and open way.

The authors of the case state that either the Director of Professional Services or the Chief of Psychiatry Services could have decided to force through the change and may have gotten away with it. In their words : "In that event the working relationships of the entire hospital administration will deteriorate."[22] In sum, the paternalistic and pervasive influence of the change catalysts played a significant role in effecting the change.

Activities of Change Catalysts : The initiation of change appears to be the primary activity of change catalysts. This accounts for their high level of influence in the early phases of change, as noted in the previous section on patterns of influence. In addition, change catalysts frequently perform significant action roles in stimulating and/or guiding one or both of the principal change parties in the change programme. Another common activity is providing suitable facilities for the undertaking of change programmes.

Without exception for the cases used in this study, change catalysts assumed the predominating role in the initiation phases of the change. In other words, it was the change catalyst who got the effort underway. Three cases besides those already discussed, will be used to illustrate these points.

Technological change, for example, is often indicated by an enterprising sales representative. A good case study within this dimension is the installation of an electronic data processing system in the California State Department of Employment.[23]

In January 1954, a local representative of the International Business Machine Company left on the desk of Walter S. Bashline, Chief of the

[22]Agnew and Hsu, *op. cit.*, p. 98.
[23]James R. Bell and Lynwood B. Steedman, *Personnel Problems in Converting to Automation*, Alabama, University of Alabama Press, 1959, p. 14.

Tabulating Section, the first edition of the manual for IBM's new 702 electronic computer. This action caused Bashline to rethink the whole data processing operation and led him to take further steps that eventually resulted in the successful conversion to an electronic operation.

Since the significant problem of change in this case was human and not technological, the change catalyst played no further important role in the change process.

In another organisation a large insurance company, which was confronted with the same problem of processing vast quantities of data, the Executive Vice President in 1948 appointed a committee of company officials on a part-time basis to investigate the possible applications of the then-developing computers to company activities. This group subsequently developed the expertise to carry out successfully in 1954 the installation of a large scale electronic data processing operation.[24]

A case study which illustrates the pervasive and strong influence of a change catalyst takes place on the Papago Indian Reservation in the Gadsdon Purchase Territory.

The superintendent of the Indian Reservation was eager to improve the lot of the simple Papago Indians under his jurisdiction. The relief programmes of the 1930's afforded the first real opportunity for improvement and rehabilitation of the reservation range lands. The superintendent and his staff were searching for ideas on this score.

A well-driller working for the Civil Conservation Corps introduced the superintendent to an agricultural practice called the *bolsa* system which had been successfully developed by Anglos in Sonoran, Mexico. The Spanish word *bolsa* means pocket. The water was literally run into a pocket and left to soak into the ground, after which the land was plowed, harrowed and well-pulverised, and the seed planted.

After a visit with the well-driller to these farms, the Papago Indian Extension Division saw possibilities for this system, and with the assistance of the Civilian Conservation Corps constructed a *bolsa*, with a sizable investment of energy and capital. After several years of frustration, the project completely failed for technical reasons. Subsequent investigation revealed, among other things, that the *bolsa* was poorly engineered and constructed, climatic conditions in the reservation were not suitable for such an agricultural practice, and inadequate source of water existed for the acreage prepared for cultivation. The irony was that the Indians realised this all the time.[25]

[24]The U.S. Department of Labour has prepared a series of interesting case studies on the effects of automatic technology. The data here was drawn from one such case by K.G. van Auken. Jr., "The Introduction of an Electronic Computer in a large Insurance Company", Washington, D.C., U.S. Department of Labour, October 1955, p. 19 (mimeographed).

[25]Henry F. Dobyns, "Blunders with Bolsas", *Human Organisation*, 10, Fall, 1951, pp. 25-32.

In sum, this case illustrates well some of the critical aspects of the role of change catalysts. Foremost is the possible explosive nature of the influence of such actors. The client system was anxious to plunge into some kind of change programme. The infectious enthusiasm of the well driller, who was a non-professional, initiated a full-blown change programme which was not based upon research and tested evidence. The programme from its inception was destined to failure.

CONCLUSION

The findings in this article should be regarded as tentative and exploratory. Until more cases are available with the dimensions of managed organisational change, it will be difficult to abstract empirical data which is suitable and sufficient for the research approach employed in this article.

While the writer of this article has collected over 200 cases on change, only a few meet the specifications which have been laid down. The other cases contain only some useful data. The overall research approach has been that if enough statistical data is collected, even though from inadequate cases, that this will shed some light on the behaviour of actors involved in and the processes of organisational change.[26] Such a research approach has its obvious limitations. The foremost is that the findings and conclusions rest upon inadequate research data.

Nevertheless, there appears to be no other alternative until suitable case materials become available. In the meantime, hopefully, this article yields some light upon diversity of the actors involved in change and provides a lead in developing a useful model in classifying one such actor, a change catalyst. Until more is known about change actors, scholars and practitioners alike interested in managed organisation change will remain 'groping in the dark'.

In final note, change—managed or natural, is a highly complicated subject. While much has been said and written over the last 100 years about rational and controllable social change, little of a concrete nature has been published. Persons involved in the field are still working with primitive social mechanisms and crude social instrumentalities. Viable social technology is almost non-existent.[27]

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[26]My personal bias against the present state of case writing is that there seems to be no overall purpose. As a result, I am afraid that the case segment of social science is like an over-inflated balloon that will soon burst unless it takes on new meaning and purpose.

[27] For more details on this point *see* the essay entitled "Reflections" by Dr. Shaukat Ali and Garth N. Jones in their *Planning, Development and Change : An Annotated Bibliography on Developmental Administration, op. cit.*

A modern society characterised by high levels of science, capital, and technology has no choice, but to face the problems of change. Social scientists, therefore, have a real job ahead of them to improve the social engineering of change. This article has been written with the hope that it offers a few insights toward this end.

Annexure

A NOTE ON THE RESEARCH METHODOLOGY

The basic data in this articles is drawn from my work : *Planned Organisational Change : A Set of Working Documents*, Los Angeles, Centre for the Study of Public Organisation, School of Public Administration, University of Southern California, 1964 (mimeographed). This document comprises the analysis of 190 cases against a scheme of analysis which designed to study. Of the 190 cases, 54 cases were determined to possess a change catalyst.

The concept of a change catalyst in my thinking at the time of the analysis was highly undeveloped and only a few of the cases entirely fit the dimensions as advanced by my conceptual scheme. Therefore, only two factors were noted. These were whether or not a change catalyst was present ; and, if so, some indication was given as to the level of influence of the change catalyst.

A panel of analysts, usually consisting of three graduate students for each case, scaled in rough percentage terms the influence relationships between each of the three principal change actors at each stage of change. For the first two stages, the analysts experienced little difficulty. The cases usually had strong indications as to the relative influence position of each actor. For the last stage considerable difficulty invariably arose. By definition, when the goal is achieved the change agent withdraws. Frequently, this did not appear to occur or was not clear. A large number of cases, therefore, were classified as having no information on this aspect for the last stage statistical extrapolation was necessary.

Figures 4, 5 and 6 contain the data used for the action on the change catalyst. On these charts are plotted the influence position of each actor as founded in the 54 analysed cases. For example, Fig. 4 shows that in the initiation stage 29 cases placed the influence of the change catalyst in the first quartile, ten in the second quartile, five in the third, and five in the fourth.

To determine the total influence of the change catalyst, a weighted average was used, not unlike that for computing a grade average. A value of one was given to each catalyst placed in the first quartile, two for the second, three for the third, and four for the fourth. The grand total of the weighted values was divided by the number of cases which this factor (change catalyst) was reported.

N=54*   N=54   N=54
NCC=5†   NCC=16   NCC=25

Scale of Influence

Initiation   Regulation   Cessation
X̄=1.55   X̄=1.04   X̄=0.649

Stages of Change
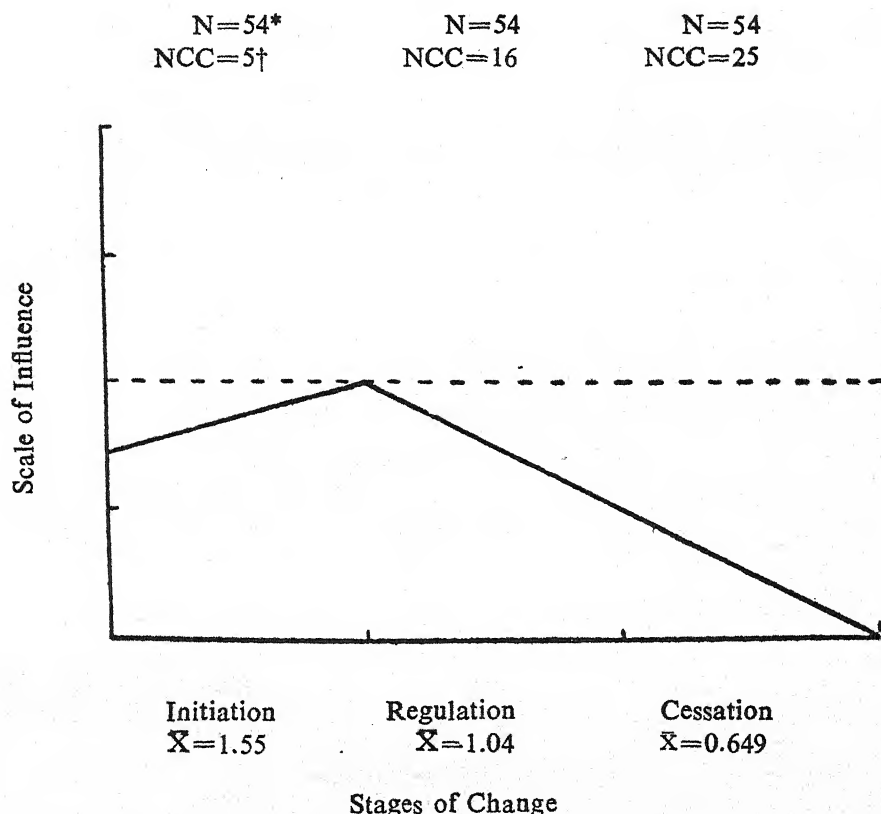
FIG. 4   Influence of the Change Catalyst in the Change Process

*N equals the total number of cases analysed.

†NCC designates the number of cases that either no change catalyst was present or insufficient information to determine the influence of change catalyst.

It should also be pointed out that the raw data in these three Figures in several incidences slightly exceed the total possible influence of 100 per cent. This resulted because the cases could only be roughly scaled. For example, two extreme levels could be possible in the relative influence ratios among the three actors involved in the change. The relative influence ratios in the regulation stage could fall somewhere in the first quartile for client system, the second quartile for the change catalyst, and the third quartile for the change agent. The sum at the highest point on each quartile would be that of 24,49 or 74 or a grand total of 147, or at the lowest point of each quartile that of 1, 26, or 54 or a grand total of 78.

N=54*   N=54   N=54
                                   NCS=11†

15   21   10

23   23   12

8   7   6

8   3   15

Initiation   Regulation   Cessation
X̄=2.55   X̄=3.28   X̄=1.93

Stages of Change
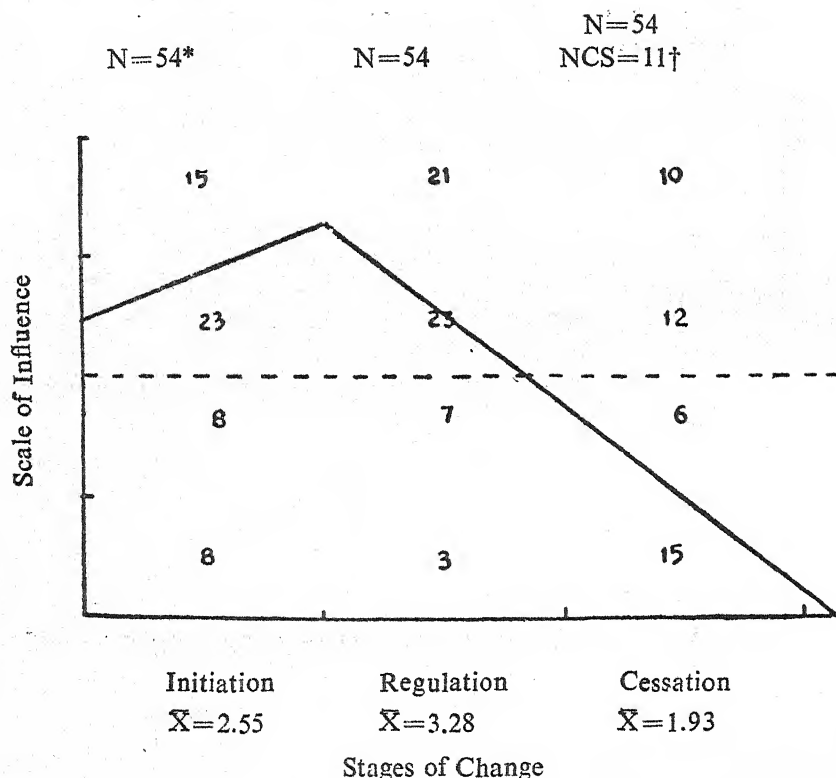
FIG. 5   Influence of the Agent of the Change in the Change Process

*N equals the total number of cases analyzed.

†NCS designates the number of cases that either no change was present or insufficient information to determine influence of change agent.

At various phases within each stage, each of the three actors' influence levels could have fluctuated between these extremes. However, the total influence for each stage must total 100 per cent.

The data in the three figures, as previously indicated, unconsciously reflect the following important element in human dynamics. The analysts were not aware of this fact at the time the cases were analysed. There is a direct relationship between the amount of influence and the amount of interaction in a change situation, or for that matter in any setting of group dynamics. This relationship is shown in Fig. 7.

N=54*   N=54   N=54
                             NCC=11†

2	3	6
5	7	9
12	19	7
35	25	21

Initiation   Regulation   Cessation
$\bar{X}=1.52$ $\bar{X}=1.73$ $\bar{X}=1.60$
                                 $\bar{X}=2.00$

Stages of Change
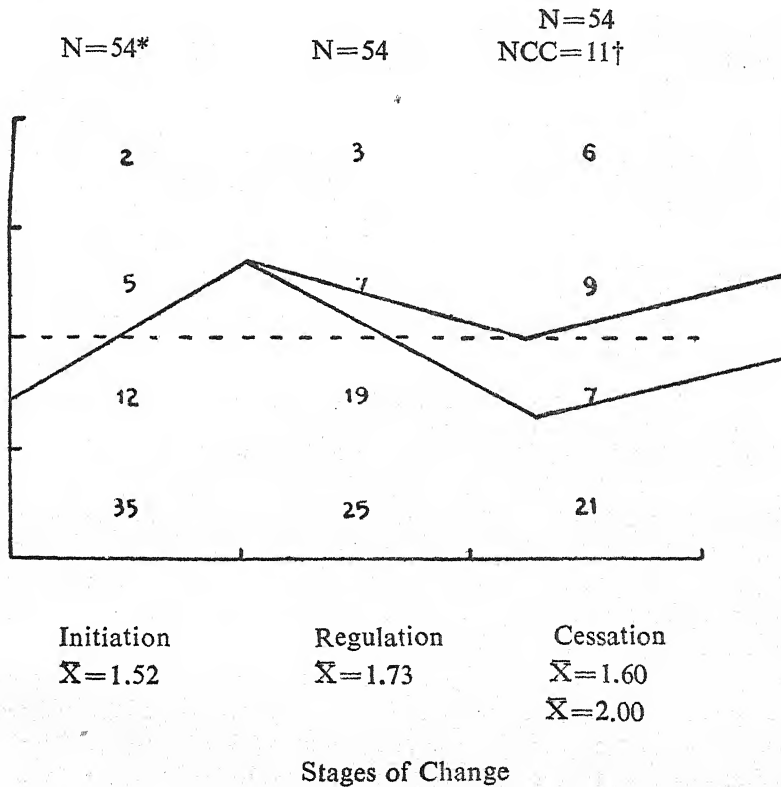
FIG. 6   Influence of the Client System in the Change Process

*N equals the total number of cases analyzed.

†NCC designates the number of cases where there is insufficient information to determine the influence of the client system.

The Figs. 5 and 6 show a substantial increase in influence by both the change agent and the client system in the regulation stage. Unquestionably, this is the stage of high interaction by all components involved in the change process. The fact was reflected in the analysis of the cases which placed the influence levels of the change agent and the client system both in the higher quartiles. For this reason the chart, as found in the body of the manuscript, levels off the influence of the change agent in the regulation stage. In short, it would be difficult to measure and depict together on one chart the total amount of influence generated in each stage and also give a reflection of influence ratios (power positions). Therefore, this study shows ratios of influence at given times. Hopefully, this other aspect will subsequently be investigated.
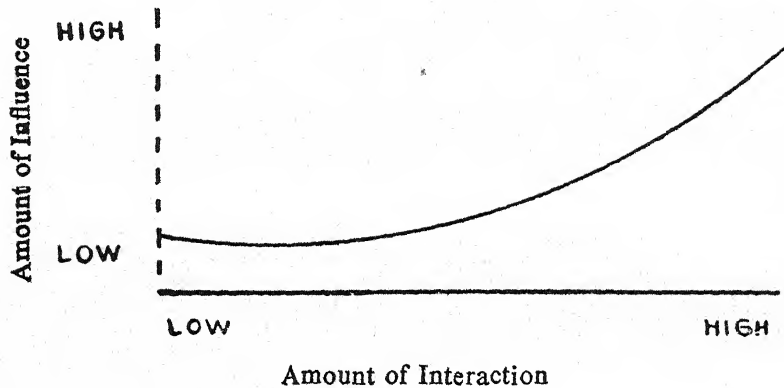
FIG. 7. Relationship between Inflnence and Interation

Also, it should be observed that in Fig. 6 there are two lines starting at the regulation stage. The reason for the two statistical computations is because a large number of cases do not contain adequate information as to what happened in the last stage. Somewhere between these two lines lies the actual power situation.

In sum, the three figures given in this research note, along with Figs. 2 and 3, give a good indication as to the nature of the influence patterns of the three principal parties involved in change. The interested reader can formulate his own conclusions from these findings, if he does not care to accept those found in the body of the article. ___

Contingency Approach to Public Administration : A Promise for the Eighties*

Arie Halachmi

THIRTY YEARS ago, a leading American journal in the field—
Public Administration Review (PAR)—published an article with the
title "The Science of Public Administration : Three Problems". Its
author, Robert A. Dahl, a well known scholar, challenged the assertation that universal laws could be formulated for public administration,
saying :

> In attempt to make the science of public administration analogous to
> natural sciences, the laws or putative laws are stripped of distortion
> caused by the incorrigible individual psyche, and of the presumably
> irrelevant effects of the cultural environment.[1]

Responding to this challenge, Herbert Simon pointed out that the
dichotomy that has been proposed by Robert Dahl fits more the difference between a pure science (*e.g.*, physics) and an applied science (*e.g.*,
aerodynamics or engineering) than the difference between the social
science and natural science. According to Simon :

> The basic distinguishing characteristic between the pure and the
> applied scientist is that the former is concerned with discovering and
> verifying correct empirical propositions about some area of human
> knowledge, while the latter is concerned with reaching decisions
> based in part (but not exclusively) upon scientific knowledge.[2]

[1] Robert A. Dahl, "The Science of Public Administration : Three Problems",
Public Administration Review 7 (1) 1947, p. 1. The importance of the cultural
environment and the value system to the development of public administration was
claimed 10 years later as one of the premises around which a new consensus seems
to be forming. See Wallace Sayre, "Premises of Public Administration : Past and
Emerging", *Public Administration Review* 18 (2) 1958, pp. 102-105.

[2] Herbert A. Simon, "A Comment on the Science of Public Administration",
Public Administration Review 7 (3) 1947, p. 200.

However, one should not conclude from this passage that Simon equates public administration with an applied science like aeronautics. Taking issue with Dahl's second constraint on the development of a science of public administration (*i.e.*, limitation of science that deals with human behaviour)[3] Simon says :

> Leaving the applied social scientists, who have found the field of public administration too narrow for their interests and their needs, we find a second group of rebels, a group of which I count myself a member, who wish to create a *pure* science of *human behavior* in organizations—and in particular, governmental organizations.[4]

Thirty years later some of the questions raised by Dahl's article are still valid : Did we manage to articulate those 'universal laws' or a general theory whose validity and reliability are not influenced by changing values, the uncertainty about human behaviour and the influence of the social context ? Or, did we grow up to realise and to accept the fact that it is impossible to develop a universal theory of public administration? Is public administration an applied or a pure science ?

The purpose of this paper is to review and to assess some of the main developments in public administration as a field of study during the last thirty years. On this basis the paper asserts that the contingency approach is the most promising approach for the 80s.

THE CHALLENGE

Nicholas Henry labels the period between 1947 and 1950 as 'reaction to the challenge'. The challenge is contained in Simon's 'The Proverbs of Administration' (1946) in his *Administrative Behaviour* (1947) and in Dwight Waldo's *The Administrative State* (1948).[5] Herbert Simon's challenge, for example, is directed at some shortcomings of the classical 'principles school', pointing out that for every principle there is a counter principle, *e.g.*, advocacy of a small span of control (that increases the number of hierarchical layers) *vs.* the recommendation to reduce the number of hierarchical layers to improve communication.

[3]Dahl, *op. cit.*, p. 4.

[4]Simon, *op. cit.*, p. 202 emphasis added.

[5]Nicholas Henry, *Public Administration and Public Affairs*, 2nd edn., Englewood Cliffs, N.J., Prentice Hall, 1980, p. 36; Herbert A. Simon, "The Proverbs of Administration", *Public Administration Review* 6 (1) 1946, pp. 53-67; and *Administrative Behaviour : A Study of the Decision Making Process in Administration Organisation*, N.Y., Free Press, 1947; Dwight Waldo, *The Administrative State : A Study of the Political Theory of American Public Administration*, N.Y., John Wiley, 1948.

Robert Dahl's challenge of 'the science of public administration' (1947) along with Simon's proverbs' suggests that if the theory of management—in general—cannot be taken as a serious science, it is presumptuous to talk about a science in the special case of public administration. The possible grave implications of such a conclusion on the development of public administration as a field of study were felt by Dwight Waldo. They are partly dealt with in his work *The Study of Public Administration* (1955).[6]

Waldo asks 'is administration an art or a science?' and suggests that public administration has important aspects of both science and art.[7] As this writer sees it, Waldo established in this observation an important guideline for developing public administration into a field of study and a theory for action by the use of a contingency approach. The relevancy of this observation to the developing and rationale of the contingency approach will be discussed later on. Here, it is sufficient to note that while Waldo points out that "the central idea of public administration is rational action",[8] he is careful to add a caveat that "an administrative organisation has an internal environment and external environment that are largely non-rational".[9] Similarly, Waldo avoids unnecessary and artificial distinction between business management and public administration.

Pointing out that the significance of 'public administration' can be sought in varying ways by the use of structural, functional analysis, Waldo sets the stage for analysis that relates all the elements of the environment, the process and the structure.[10] Waldo avoids a common mistake of confusing a general theory of management or administration with partial and particularistic theories that result from observing different organisational structures, motivation (*e.g.*, profit or survival) environments (*i.e.*, internal or external), beneficiaries, source of financing or types of control and recruitment.[11] Unfortunately, it is still possible to detect this mistake in recent text books in public administration, *e.g.*, when they emphasise the false assumption that private organisations are driven by profit while public organisations are judged by the public interest and accountability.[12] To be sure, Cyert and

[6]Dwight Waldo, *The Study of Public Administration*, N.Y., Random House, 1955.

[7]*Ibid.*, p. 3.

[8]*Ibid.*, p. 11.

[9]*Ibid.*, p. 13.

[10]*Ibid.*, pp. 8-9.

[11]See for example Peter M. Blau and W. Richard Scott, *Formal Organisations*, San Francisco, Chandler, 1962, p. 40 ff.

[12]See for example Jerome B. McKinney and Lawrence C. Howard, *Public Administration*, Oak Park, Moore Publishing Co., 1979, pp. 41-43.

March's *A Behavioral Theory of a Firm* (1964) compliments the Simon Smithburg and Thompson (1950) notion of organisational survival as a major drive of organisational behaviour.[13] Even though this point is not central to our discussion here, it is worth noting that the growing use of benefit cost analysis in the public sector, and particularly in connection with the use of PPBS and ZBB, suggests that accounting of benefit and cost in the public sector is as important as it is in the private sector. Turning public agencies like the post office in the US into a public corporation to facilitate economy and changing needs and market situations is another case in point to illustrate the fallacy of the proposed dichotomy between a theory of business administration and a theory of public administration. Finally, the increased involvement of the government in regulating and licensing the private sector suggests that private entrepreneurs may have to consider accountability and the public interest. In comparison, some 'strong' public agencies are 'immune' from public reviews by a shield of official secrecy.

The search for a 'unified theory of management' in the fifties represents the attempt to respond to the challenge. It can be characterised by the effort to formulate a conceptual framework for studying or thinking about management.[14] This represents a shift from efforts to identify general guidelines for action that characterised the classic-principles approach. The development of such a conceptual framework was considered by many to be the only way out of the management theory jungle.[15] The works of Ludwig Von Bertalanffy, on the one hand, and those of Kurt Levine, Carl Rogers and Chris Argyris, on the other, were the intellectual grounds on which such concepts were cultivated.

TOWARDS COMPOSITION AND DECOMPOSITION OF THE ORGANISATION : THE INFLUENCE OF GENERAL SYSTEM APPROACH

The general system theory influenced the thinking about management in several ways. First, it directed attention to the need to study simultaneously organisational units and their interrelationships. It brought up the need to define the boundaries of the system and to determine how the system under consideration relates to other systems. The general system theory pointed out also that the system must be grasped

[13]Richard M. Cyert and James G. March, *Behavioral Theory of the Firm*, Englewood Cliffs, N.J., Prentice-Hall, 1963.

[14]Harold Koontz (ed.), *Toward a Unified Theory of Management*, N.Y., McGraw Hill, 1969.

[15]See for example Harold Koontz, "The Management Theory Jungle", *Academy of Management Journal*, December 1961, pp. 174-188.

as a whole; that it cannot be understood by studying only its parts. Hence, it influenced a wholistic approach to the study of any organisation.[16]

The attractiveness of the general system theory to managers in general and public administrators in particular resulted also from its similarity and resemblance to theories in the natural and physical sciences. Bertalanffy's claim that there are basic similarities among all systems contributed not only to the scholarly thinking of social scientists but to their self-esteem as well.[17]

The reference of social scientific to scientific terms that were used earlier to describe the behaviour of biological systems such as 'homeostasis' and 'entropy' is a case in point.[18] Thus, the closed, and even more so, the open system models provided social scientists with a way and legitimacy to present their theories in the same form used by physical and natural scientists. The works of Parsons, Easton or Deutsch illustrate the general effort of social scientists—at least in America—to use a system approach for purposes of basic research.[19] These studies, following the tradition of research in the natural sciences, were concerned mainly with descriptive-explanatory modelling of social phenomenon (as distinct from normative-prescriptive modelling). These works and others represent the attempt of social scientists to study the functions and structures of systems in order to suggest a general, *i.e.*, universal, concept of social systems including the sub-systems of organisations or the public administration.

Other works, like the studies of Bauer, Pool and Dexter ; Ira Sharkansky or Thomas Dye illustrate subsequent attempts to identify not only the characteristics and boundaries of specific sub-systems, but also the critical relationships among specific units within these sub-systems of the American political/policy-making systems.[20] Here again, the attempt was

[16]For a good review of General System Theory with reference to the Classical Theory of Management see Gilbert B. Siegel, "The Classical and Systems Theories", in Michael J. White *et. al.*, (eds.), *Managing Public Systems*, North Scituate, Duxbury Press, 1980, Ch. 1, pp. 15-46.

[17]Ludwig Von Bertalanffy, *General Systems Theory*, N.Y., G. Braziller, 1969.

[18]James G. Miller, "Living Systems: Basic Concepts", *Behavioral Science* 10 (3), July 1965, pp. 193-237. See also Chris Argyris, *Personality and Organisation*, N.Y. Harper & Row, 1957, Ch. 9, pp. 229-237. Argyris uses the terms disorganisation. However his second conclusion "that in every formal organisation lie the roots of disorganisation", suggests that he uses this term as a synonym for general system theory concept of 'entropy'.

[19]Talcott Parsons and Edward A. Shils, *Towards A General Theory of Action*, Cambridge Mass, Harvard University Press, 1967; David Easton, *A System Analysis of Political Life*, N.Y., Wiley, 1965; Karl W. Deutsch, *Nerves of Government*, N.Y., Free Press, 1963.

[20]Raymond A. Bauer, Ithiel de Sola Pool and Lewis A. Dexter, *American Business and Public Policy*, N.Y., Atterton, 1964; Thomas R. Dye, *Politics, Economics*,

to identify critical relations in a descriptive-explanatory fashion. Such studies suggest why and how policies are being shaped or what influences them. Yet they are (relatively) free from normative presumptions about the adequacy of the ends of the policies they deal with or their underlying values. In doing so, Sharkansky, Dye and other students of public administration illustrate the possibility to qualify Dahl's claim that "the student of public administration cannot avoid a concern with ends."[21]

THE HUMAN ELEMENT RECONSIDERED

Simultaneously with the development of the system approach, managers started to give more consideration to the human side of the enterprise. The Hawthorne studies revealed the significance of the human factor and the need to consider it before administrative decisions are being made.[22] The Hawthorne studies provided a strong jusitification for incorporating sociological[23] and psychological[24] considerations into the administrative dedision-making process in general and in the area of personnel management in particular. The *American Soldier* (published in 1949) illustrates consequent attempts to relate an individual's performance to personnal characteristics or morale.[25] While the war and early post-war studies on managerial thinking influenced the use of measurement (and therefore testing !) to predict performance,[26] other studies concentrated on the prospect of changing attitudes or behaviour to improve it. Some of the most influential works in this direction were produced by Kurt Lewin, Carl Rogers and Chris Argyris.

Lewin wanted to know what conditions have to be changed to bring about a given result and how can one change these conditions with the

(*Continued from previous page*)
and the Public, Chicago, Rand McNally, 1966 ; Ira Sharkansky and Augustus B. Turnbal, III, "Budget Making in Georgia and Wisconsin : A Test of a Model". Reprinted in Ira Sharkansky (ed.), *Policy Analysis in Political Science*, Chicago, Markham Publishers, 1970, pp. 225-238.

[21]Dahl, *op. cit .*, p. 3.

[22]It is important to note that recent analysis of the original Hawthorne data challenges the original conclusion. See Richard Herbert Franke and James D. Kaul, "The Hawthorne Experiments: First Statistical Interpretation", *American Sociological Review* 43 (5), October 1978, pp. 623-643.

[23]Philip Selznick's, *TVA and the Grass Roots*, University of California Press, 1948, is one of the early works in this direction.

[24]See for example Alphonse Chapanis, Wendell R. Garner and Clifford T. Morgan, *Applied Experimental Psychology : Human Factors in Engineering Design*, N.Y., John Wiley, 1949, Chap. 1, pp. 1-13.

[25]Samuel Steuffer, *et al.*, *The American Soldier*, Military Aff. Aero., 1949.

[26]For review of other early works see John C. Flanagan, "The Critical Incident Techniques" (1954) Reprinted in Don Mankin *et. al.*, (eds.), *Classics of Industrial and Organisational Psychology*, Oak Park, Moore Publishers Co., 1980, pp. 42-72. Or, Arturelt, Brayfield and Walter. H. Crockett," Employee Attitudes and Employee Performance" (1955) in Mankin, *op. cit.*, pp. 232-258.

means at hand. Drawing from his earlier studies on leadership, tension and levels of aspiration, Lewin introduced the concept of 'force field' in which a given condition is perceived as a result of a multitude of forces—some driving and some restraining.[27] A given situation, therefore, represnts a state of equilibrium among these forces. Hence a desired change can result ony from careful intervention to alter this equilibrium for replacing it by a new one.[28]

It is important to note that while Lewin was not referring to the system apppoach when he advocated force field analysis or when he presented behaviour as a function of both the personality and the environment $B=f$ (P,E) he was concerned with linkages and inter-relations in much the same way like the system approach. Also, in connection with Dahl's concern about norms, it is important to note that Lewin's concern with the role of the individual in influencing a change, results from his conviction that such involement may increase the prospect of a successful change, and is independent from his convictions of what is normatively right or wrong. To be sure, the normative attributes of Lewin's approach are a function of the ends he wanted to achieve and they cannot be derived directly from any specific value. In the words of Neely Gardner:

> one overriding theme is derived from the Lewinian and Rogerian postulate that people are more likely to change if they participate in exploring the reasons for, and means of, change.[29]

The approach and the works of Kurt Lewin do not support the claims concerning the necessary role of normative values in the developing of an administrative theory. For even though Lewin is not a public administrator, his works did influence both the practice and theory of public administration, *e.g.*, in the planning of governmental reorganisations or training. Also, Lewin's studies do not support Dahl's claim about the inherent limitation on the development of the science of administration because of the unpredictable human element. Lewin suggests that it is possible to generate valid assumptions about human behaviour.

Dahl claims that "what marks off the field of public administration from psychology or sociology or political institutions is its concern with human behaviour in the areas of services performed by govern-

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[27]Kurt Lewin, *Field Theory and Social Science*, N. Y., Harper and Brothers, 1951, p. 228.

[28]*Ibid.*, pp. 174-187.

[29]Neely Gardner, "Action Training and Research", *Public Administration Review*, 34 (2), 1974, p. 107.

mental agencies".[30] Using Lewin's equation $B = f(P, E)$ it is clear that the specific reference to 'government agencies' is unnecessary. The 'public' character of the agency—as far as it influences behaviour—is accounted for by consideration of the environmental factors. As a matter of fact, by replacing the artificial distinction between business and public administration with a general consideration of the environment, Lewin allows for the possibility that different locations, procedures, cliental or organisational structure may influence behaviour more than the legal differences between two administrative entities. In a related fashion Chris Argyris sees in the ability to differentiate between the individual and the organisation—the environment that influences behaviour— justification for "a new behavioural sciences-organisation behaviour". He says:

> Organisational behaviour can stake out a claim as basic behavioral science because of the heavily documented empirical observation that most of life is organised—most social organisations, at the time of their inception, contain at least two basic components. They are the individual and the formal organisation. These basic components when they are fused give birth to the social organisation. The properties of each must be known if the impact of their simultaneous interaction is to be determined.[31]

Carl Rogers concentrated on the individual himself and his striving for maintenance and self-enhancement.[32] He pointed out that the individual's reaction to the environment is dependent on the way he perceives it. Thus a change in the pattern of reaction, *i.e.*, behaviour, necessitates a change in the individual's frame of reference and the way he perceives the world. The Rogerian notion that the individual strives for self-enhancement on terms that he understands fits nicely with the Lewinian notion of involving the invividual in the change process and the ten propositions of Chris Argyris about the inter-relation between the individual and the organisational environment. For the purpose of this article it is important to note first that like Kurt Lewin, both Rogers and Argyris present their theories as descriptive-explanatory theories. Second, like Lewin they too differentiate between the individual and the relevant environment. Third, that all of them see behaviour as a function or a dependent variable that can be explained or even predicted. This is contrary to the claim of Dahl that the human factor limits the ability to develop a general theory.

[30]Dahl, *op. cit.*, p. 4.

[31]Chris, Argyris, *op. cit.*, p. 229.

[32]Carl Rogers, *Client Centered Therapy.* N.Y., Houghton-Mifflin, 1951, pp. 483-524.

Simon's response to Dahl's challenge included a suggestion for a possible new paradigm for public administration. This paradigm recommended a dual focus. One focus is on public administration as an applied science using sociology and economics to prescribe for public policy. The other possible focus is on public administration as a pure science that uses "a more solid theory on the foundations of social psychology."[33] Indeed, Simon's satisfying model of decision-making uses social psychology to point out that the rationality of a decision depends on the aspirations of the involved individual(s).[34] However, the works of Kurt Lewin, Carl Rogers and Chris Argyris, together with Abraham Maslow's concepts of the hierarchy of needs illustrate how psychological studies can provide a solid basis for an applied science. This point is demonstrated in the subsequent works of Douglas McGregor, Warren Bennis, Rensis Likert and Frederick Herzberg.[35] During the 60s these scholars and others were looking at the employee's motivation and satisfaction at work as a key for improved productivity. These efforts are well illustrated by Blake and Mouton's concept of the managerial grid.[36]

The attempt to provide managers with practical suggestions concerning the organisation of work, training and the introduction of change, leadership styles, satisfaction and motivation characterised the behavioural or American approach to organisation theory (and thus to some aspects of public administration) in the late 50s' and early 60s. Wendell French summarises the efforts in the diagram[37] on the next page.

THE SEARCH FOR A SYNTHESIS

The system approach and the works of social psychologists and sociologists in the 50s influenced the development of organisation theory and practices of management in the 60s. The majority of these efforts can be classified into two major categories : First, attempts to improve effectiveness and productivity by an increased involvement of employees in the administrative process. Such efforts are related to the growth of the

[33]Simon, 1947, *op. cit.*, p. 207.

[34]Herbert Simon, *Models of Man*, N.Y., Wiley, 1957, pp. 241-ff.

[35]See for example Douglas M. McGregor, *The Human Side of Enterprise*, N.Y., McGraw Hill, 1960. Warren Bennis, "Organisations of the Future" (1967), reprinted in Jay M. Shafritz and Albert C. Hyde, *Classics of Public Administration*, Oak Park Moore Publishers, 1978, pp. 276-288; Renis Likert, *The Human Organisation*, N.Y., McGraw-Hill, 1967; Frederick Herzberg, "One More Time: How Do You Motivate Employees". (1968) Reprinted in Mankin, *op. cit.*, pp. 258-269.

[36]Robert R. Blake and Jane S. Mouton, "Grid Organisational Development", 1967. Reprinted in Mankin, *op. cit.*, pp. 548-555.

[37]Wendell L. French, *The Personnel Management Process*, 4th edn., Boston, Houghton Mifflin, 1978, p. 104.

FRENCH'S PARALLEL THEORIES ABOUT MOTIVATION, STYLE OF LEADERSHIP, AND ORGANISATIONAL CLIMATE

		Hierarchically directed		*Participative, self-directed, team interactive*	
Theories about motivation	Abraham Maslow	Physiological, safety,	Belonging and security	esteem needs	Self-actualisation and growth needs
	Frederick Herzberg	Dissatisfiers and hygiene factors		Satisfiers and motivating factors	
	Chris Argyris	Dependence, submissiveness, frustration		Aspirations toward psychological success	
	Douglas McGregor	Theory X cosmology		Theory Y cosmology	
Theories about style of leadership	Hemphill et al.	Initiating structure		Consideration	
	Blake Mou'on	*Style 9.1* Maximal concern for production, minimal concern for people	*Style 5.5* "Middle-of-the-road" concern for both production and people	*Style 9.9* Maximal concern for both production and people	
	Rensis Likert	*System 1* Exploitive authoritative	*System 2* Benevolent authoritative	*System 3* Consultative	*System 4* Participative group
Theories about organisational climate	Warren Bennis	Bureaucratic organisation	Principle of supportive relations	Organic-adaptive organisation	
	Burns and Stalker	Mechanistic systems		Organic systems	

organisational development (OD) school. The second category includes the effort to improve decision-making.

The aims of OD, as understood in the US, were specified by the National Training Laboratories as follows:

1. to create an open, problem solving, climate throughout the organisation;
2. to supplement the authority associated with role or status with the authority and competence;
3. to locate decision-making and problem solving responsibilities as close to the information sources as possible;
4. to build trust among individuals and groups throughout the organisation;
5. to make competition more relevant to work goals and to maximise collaborative efforts;
6. to develop a reward system which recognises both the achievement of the organisation's mission (profits or service) and organisation development (growth of people);
7. to increase the sense of 'ownership' of organisation objectives throughout the work force;
8. to help managers to manage according to relevant objectives rather than according to 'past practices' or according to objectives which do not make sense for one's area of responsibility; and
9. to increase self-control and self-direction for people within the organisation.[38]

In England, a different version of the OD approach developed under the auspices of the Tavistock Institute.[39] As a result of studies in a British coal mine and in an Indian textile mill, the Tavistock Institute promoted the concept of the 'socio-technical system'. According to the socio-technical perspective, any production organisation is a combination of technology (*e.g.*, task requirements, or physical layout) and a social system—a system of relationships between employees. The two components are in mutual interaction, each determining the other. Thus, Trist, Price and other members of the Tavistock Institute were concerned with a better fit between the technology, structure and social interaction of the work place rather than exaggerate the importance of one at the expense of the other.[40]

[38]National Training Laboratory Institute, "What is OD?", *New, and Reports* 2, June, 1968, p. 1.

[39]E.L. Trist, G.W. Higgin, H. Murray, and A.B. Pollock, *Organisational Choice*, London, Tavistock Publications, 1965.

[40]See Frank J. Lundy and Don A. Trumbo, *Psychology of Work Behavior*, Homewood, Ill., Dorsey Press, 1980, pp. 502-ff.

INCREASING THE RATIONALITY OF MANAGEMENT

The effort to improve decision-making in the 60s was characterised by two major efforts. First, a search for the meaning of goal, effectiveness and efficiency. Second, an attempt to provide the manager with a framework for action.

The different emphases of the efforts to define organisational effectiveness and organisational goals were dealt with in an excellent article by J. Barton Cunningham, 'Approaches to the Evaluation of Organizational Effectiveness' (1977). For our purpose Cunningham's summary of the different approaches as presented in the statement on the next, two pages[41] is sufficient.

The attempts during the 60s, to provide managers and in particular public administrators with an analytical framework for action, represent a paradox. On the one hand, Charles Lindblom introduces his incremental model of decision-making that justifies and shows the rationality of a limited analysis in the fashion of 'muddling through'. On the other hand, others were trying to increase the use of rigorous and comprehensive analysis by expanding the use of PPBS in most agencies of the American federal government. The paradox is that Lindblom's disjoint incrementalism results from the belief that comprehensive analysis of information and options are impossible. PPBS, on the other hand, represents the belief that careful planning and close examination of data is the best way to upgrade the rationality of the system.

The incremental model and PPBS were the subject of many criticisms but these resulted more from the human ecology of the public sector than from logical flaws in each of them as a conceptual framework.

Critics of the incremental model pointed out that it is heavily biased towards the administrative culture of developed countries : yet there is little research to show that it does not describe or explain decision-making in developing countries. Lindblom was accused of sanctifying an undesired pattern of behaviour—for legitimising inertia. Or, that his model should not be used under certain circumstances.[42] Some twenty years later, the incremental model seems to be still the favourite model of public administrators. Whether this is because it explains or describes the process of decision-making or because it legitimises and rationalises a prevailing norm of behaviour still deserves closer consideration.[43]

[41]J. Barton Cunningham, "Approaches to the Evaluation of Organizational Effectiveness", *Academy of Management Review* 2(3), July, 1977, pp. 463-474. The table is adopted from p. 472.

[42]For some critics of the incremental model see Vehezkel Dror, *Public Policy-making Reexamined*, San Francisco, Chandler Publishers, 1968, pp. 143-ff.

[43]See for example the special symposium in *Public Administration Review* 39 (6), 1979, pp. 517-555.

The incremental model of decision-making and the other models that were developed to overcome its shortcomings may have influenced the way managers considered different factors. Yet, none of these models offered the manager a conceptual framework by which to identify what to consider. Thus, much of the theoretical developments during the 60s remained of little practical use for the managers. The emergence of the contingency approach during the 70s was meant to correct it.

IT ALL DEPENDS: THE CONTINGENCY APPROACH

The contingency approach to management resulted from two developments. First, as noted by Fred Luthans, it became apparent in the 1970s that neither the quantitative nor the behavioural approaches have all the answers for all situations.[44] Second, research results showed that there is no one single best way of doing things. That is, that under different circumstances effective management demands different organisational structures, styles of leadership, control, or method of coordination.[45] Kast and Rosenzweig describe the essence of the contingency approach as follows :

> The contingency view seeks to understand the interrelationships within and among subsystems as well as between the organisation and its environment and to define patterns of relationship or configurations of variables. It emphasises the multivariate nature of organisation and attempt to understand how organisations operate under varying conditions and in specific circumstances. Contingency views are ultimately directed toward suggesting organisational designs and managerial actions most appropriate for specific situations.[46]

In a way contingency approach is an attempt to bridge the gap between organisation theory and practice. It advocates the use of the general system approach along with the available knowledge on human behaviour, technology and political economy to study the inter-dependencies and behaviour of all the relevant sub-systems. These include both the sub-systems that shape the organisation's external environment and those that make it internal environment. That is, those sub-systems over which the manager has little or no direct control like the techno-

[44]Fred Luthans, "The Contingency Theory of Management", *Business Horizons*, June, 1973, p. 70.

[45]Fred Luthans, *Introduction to Management : A Contingency Approach*, N.Y., McGraw-Hill, 1976, p. 33-ff.

[46]Fremon E. Kast and James E. Rosenzweig, *Contingency Views of Organisation and Management*, Chicago, SRA Inc., 1973, p. 313.

CUNNINGHAM'S APPROACHES TO THE EVALUATION OF ORGANISATIONAL EFFECTIVENESS (1977)

Organisational Effectiveness Model	Organisational Situation	Central Focus or Purpose	Assumption	Limitations
Rational G	Evaluation of performance of organisational structures.	Determine degree to which organisations are able to achieve their goals.	An organisation is rational if its activities are organised to achieve its goals.	The model frequently shows that organisations do not reach their goals. There is also a difficulty in identifying and defining organisational goals.
Systems Resource	Evaluation of performance of organisational structures.	Determine decision-maker's efficiency in allocating and utilising resources for fulfilling various systems needs.	An organisation, in order to survive, must satisfy some basic needs: 1. Acquiring resources, 2. Interpreting the real properties of the external environment, 3. Production of outputs, 4. Maintenance of day-to-day internal activities, 5. Coordinating relationships among the various subsystems, 6. Responding to feedback, 7. Evaluating the effect of its decisions, and 8. Accomplishing goals.	Measures of all systems needs are difficult to develop.
Managerial Process	Evaluation of performance of organisation's human resources.	Determine capability or productivity of managers or managerial processes.	An organisation can be considered rational when its various managerial processes and patterns enhance the individual's productivity or capability to obtain objectives.	Measures of productivity and capabilities pinpoint personal problems and limitations.

Organisational Development	Evaluation of performance of organisation's human resources.	Determine organisation's ability to work as a team and fit the needs of its individual members.	Work which is organised to meet people's needs as well as organisational requirements tends to produce the highest productivity.	Emphasis on the informal organisation takes precedence over the formal. Individuals may be reluctant to accept interpersonal feedback supplied by the model.
Bargaining	Evaluation of impact of decisions.	Determine use or uses which various decision-makers make of their resources in achieving organisational goals.	An organisation is a cooperative, sometimes competitive, resource distributing system.	The model deals with a very specific part of the organisation's activities.
Structural Functional	Evaluation of impact of organisation's structure on performance.	Determine organisation's ability to develop structures to maintain and strengthen performance.	A system's survival is equated to satisfying five needs : 1. Security of organisation in relation to environment, 2. Stability of lines of authority and communication, 3. Stability of informal relations in organisation, 4. Continuity of policy-making, and 5. Homogeneity of outlook.	The model deals with a very specific part of the organisation's activities.
Functional	Evaluation of impact of organisational activities.	Provide information on social consequences of organisational activities and on organisation's ability to meet needs of key client groups in its environment.	Every system must define its purpose for being (goal attainment), determine resources to achieve its goals (adaptation), establish means for coordinating its efforts (integration), and reduce strains and tensions in its environment (pattern maintenance).	The model deals with a very specific part of the organisation's activities.

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logical, social, economic or political sub-systems, or those over which the manager may have direct control like communication, control, production and leadership.

Contingency approach is concerned with the functional relationships among the different variables of the external and internal environments and how a change in one may influence others. It recognises the ever changing nature of inter-dependencies and functional inter-relations. Hence it strives to provide the manager with a theoretical background that results from cumulative lesson(s) from experiences, studies and observations together with the necessary skills to analyse and recompose a given situation to its various elements.

Many times the contingency approach is referred to as situational management, even though some writers claim that there is more than a semantic difference between the two.[47] The term situational management does convey one important attribute of the contingency approach, that is, its emphasis on the conceptualisation of an existing situation as a whole by a survey of its different components. Contingency approach enhances feasibility analysis and contextual thinking to bring the manager to differentiate between the desired and the possible. By the same token, contingency analysis forces the manager to compare his situations to similar situations elsewhere, but makes him consider all those little factors that make his situation so unique.[48] In this way the contingency approach allows learning and the use of new ideas while avoiding the risk of transplanting them without the necessary modifications. The failure of PPB outside of the defence establishment in the US and its limited successes in other countries that imitated the US without much modification is a case in point.

Another important attribute of the contingency approach is the advocacy of caution and scepticism. As a matter of fact, the essence of the contingency approach can be summarised in the note 'it all depends'. The contingency school is against a cookbook approach. It rejects the notion that there are readymade or permanent solutions. It points out that a recipe that seems to work once may not work again in the future or in other organisations because of differences in the external or internal environments. Instead, the approach recommends a continuous study to find out how changes—and particularly changes in the external environment—are likely to influence the inter-dependencies among sub-systems, and thus their function. Consequently, the contin-

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[47]Luthans, 1976, *op. cit.*, p. 32.

[48]The need to train decision makers to differentiate between 'generic' characteristics and 'ad hoc' characteristics was elaborated in Arie Halachmi, "Introducing the Concept of Feasibility in Class", *Teaching Political Science* 6(3) April, 1979, pp. 291-310.

gency approach makes an OD effort only one of several efforts to identify a need for change. In other words, as I see it, the contingency approach is concerned with all the sub-systems of the organisation, *e.g*, technological and financial as well as with the human sub-system.

CONTINGENCY APPROACH AS A UNIVERSAL APPROACH

I have started this paper with a reference to Robert Dahl's criticism of the science of public administration because in his opinion public administration cannot produce a valid set of universal laws. In different places I tried to show that some of the constraints that were supposed to prevent the development of such laws according to Dahl, did not have their intended impact. Specifically, the unpredictability of the human nature did not stop the behavioural scientist from developing a body of knowledge to predict human response under specified conditions. Similarly, a possible concern about value systems did not keep other social scientists from developing framework to study and analyse organisations for purpose of describing and explaining the administrative process and its results. All this took place during the last 30 years mostly without the need to pass a judgement about the desirability of certain patterns of behaviour, organisational structure of styles of management from a normative point of view. Even when McGregor and others presented alternative or preferred models of managerial behaviour, its desirability was explained by reference to its expected potential to work better under given circumstances and not because of a claim for normative superiority.

Since the contingency approach, as I understand it, developed as a result of different and independent scholarly effort, it can incorporate opposing views without being inconsistent.[49] To be sure, the contingency approach makes use of many theories to help the manager identify the components, variables and inter-dependencies in a given situation. By training the manager to carry out systematic analysis of the situation along with the possible consequences of each decision, contingency approach is a way to study or to prepare the manager to carry out his job anywhere. It does not tell the manager (like the classical approach) what is the preferred solution or the better theory by which to search for it. Rather it leaves him with doubts that should make him confirm and double check each move he makes. Thus, the contingency approach reduces the risk that something which is artificial, alien or contradicting to a given situation norm or culture would be adopted and go undetected for a long time.

[49]For an attempt to outline different contingency themes in different studies see Kast and Rogenzweig, *op. cit.*, p. 305-ff.

The contingency approach advocates a way of looking and studying organisations. Thus, it does not have to be concerned with the possible differences between public and private organisations, character of cliental technology, products or socio-political ecology of the organisation. These and other factors are considered to the extent that they are to be relevant to the decision of the organisation or the style of management. Hence, the cultural differences between societies become part of distinct sets of variables upon which an optional or a satisfactory performance of a given structure or managerial style is contingent.

The theoretical elegance of the contingency approach is very attractive, and it is promising to help the development of a better body of knowledge in the 80s. Yet, if it is to be of any help to practitioners, this body of knowledge must be shaped in a way that differs from the format that was used in the past to develop and present the cumulative knowledge of management and administration. This in my opinion is the task ahead of us.

AN AGENDA FOR THE EIGHTIES

About thirty years ago Dwight Waldo pointed out that public administration is both an art and a science. This, in the opinion of this writer, characterises much of the contingency approach to management. The artist must follow the rules of harmony, or rely on the laws of perspective, use certain materials and select particular combinations of colours or voices to express his ideas. By the same token the administrator has his own set of variables that he must consider in order to do what he wants to do. Formal education and training are not a substitute for the artist's sharp eye or ear. But it can help to mobilise artistic talent and make it bloom. Similarly, in the field of management, formal training can enhance latent administrative talents. Yet most of the efforts in recent years were directed either at the development of an abstract organisation theory, too general to help the practitioner, or at the developing of interpersonal skills. The latter, important as they are, fail to provide the practitioner with the capacity to comprehend a situation as a whole—the event in its context—in order to derive a principle for action.[50]

The development of the contingency approach during the 70s is indicative of its promises for the 80s. However, this potential may be realised only if a fundamental change in the interactions among scientists and practitioners can be brought about. Such change should facilitate the development of a functional administrative theory that is expressed in operational terms. Practitioners should make their experiences and

[50]See Fred Luthans, 1976, *op. cit.*, p. 242-f.

observations available to social scientists. The latter should use these and other sources of empiricial data, instead of arm chair exercises in theoretical induction or deduction, to modify and elaborate on the existing theory.

Specifically, the contingency approach may be able to help administrators if it will be able to provide them with tools like:

1. a clear procedure for identification of the most relevant variables that influence a given situation;
2. a clear procedure for identifying or veryfying the critical element that makes a given situation unique—different from other experiences; and
3. a body of professional literature, similar to the one that is available to lawyers or physicians, that allow the manager to find out what were the consequences of alternative solutions taken by others in similar situations.

Needless to say that while it is up to the academicians to develop these tools, their exact specifications must come from the practitioners. By the same token, practitioners should be involved in the development of these tools to make sure they meet the needs of the administrators. The availability of such tools is not going to be a panacea for all the maladies of management everywhere. However, the talented administrator may be able to do a better job, at least by not repeating the mistakes of others, if such aids will be at his disposal. □

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